

Avian Fossils in Collections of Los Angeles County Museum

Age	Locality	Material	Case
CRETACEOUS	Loc. 1963, Buffalo Gap, So. Dakota	Three sizes Hesperornis femora; vertebrae, patella	
EOCENE			
Wasatch	Loc. 230, Cody, Wyo.	no. 4652 gruiform tibia-tarsus, and 2 other fragments	III-8
Uintan	Loc. 180, Tapo Ranch, Ventura Co., Calif.	Unidentified scap.	III-14
"	Loc. 1723, Poway fm., San Diego, Calif.	TYPE humerus Protostrix californiensis Howard 6171	Type
"	Loc. 1877 Poway fm., San Diego, Calif.	No. 2851 Gruiform tibia-tarsus	III-16
"	Loc. 249, Poway fm., San Diego, Calif.	Sp? small frag.	III-16
OLIGOCENE			
Whitneyan	Loc. Up. Brule; Wounded Knee area, So. Dakota (field no. JRM 1467)	humerus and ungual, small grouselike galliform	IV-20
MIOCENE			
Arikareean	Locs. 1821 and 1982, Sharp's fm. So. Dakota	No. 9357 hawk tibia-tarsus humerus (no.?) grouse?	V-14
"	Loc. 1018, Vasquez Canyon, Calif. Tick Canyon fm.	TYPE foot bones Michlerax stocki Howard, 1396	Type
	Locs. Sharktooth Hill	Many in process of ident.	V-24
"Mohnian"	Loc. 1127 Tepusquet Canyon, Calif.	TYPE slabs Palaeoscini turdi- ristris Howard, no. 2604	Type
	Loc. 1945, "Leisure World", El Toro, Calif.	Many in process ident.	Reserve
Barstovian	Loc. CIT 44 Sucker Creek, Malheur Co., Oregon	No. 5741 femur, sp.? 5742 doubtfully bird	VI-8
"	Locs. 1090, 1091, Barstow, Calif.	Several recorded Miller	VI-23
	Loc. Old Topanga Rd. & Ventura Blvd. L.A. Co., Calif.	No. 2703, shearwater slab	V-24
	Loc. Balcom Canyon, Ventura, Co., Calif.	No. 2706, shearwater	V-24
	Loc. 1267 Sepulveda-Ventura Blvd., L.A. Co., Calif.	No. 2707 Osteodontornis jaw No. 2705 P. diatomicus No. 2704 S. willetti	V-24
	Loc. 1752, 4 mi. so. Ventura frwy, Encino Calif.	No. 5001, solid in slabs	V-24
	Loc. 1894A, Beverly Glen Canyon, Calif.	No. 7320, pelvis, slab.	V-24
	Loc. S. Diego frwy nr Mulholland Dr. cut, L.A. Co., Calif.	unident. small bones	V-24

Avian fossils in LACM collections, continued - p. 2

MIOCENE continued	Locality	Material	Case
Loc. 1229,	Whitsett-Laurel Canyon; L.A.Co., Calif.	no. 2532, solid humerus referred S. pohli, Howard	V-24
Loc. 1229	Whitsett-Coldwater " L.A.Co., Calif.	no. 2674, TYPE slab Sula pohli Howard	Type
Loc.	Pt. Fermin, Calif.	no. 2891 footbones recorded as "Rallidae"	V-24
Loc.	El Sereno, near Round Drive and Chester St.	no. 2533 solid humerus on which genus Paleosula erected for S. stocktoni	V -24
Loc. 1875	Orange Co., Calif. Capistrano fm.	no. 6135 shearwater on 2 slabs (poor)	V-24
loc. 1018	Empec, Calif.	no. 880 P. diatomicus slab	Mez.Exhib.
Loc. 1945	"Leisure World", ElToro, Calif.	many, unidentified	
PLIOCENE			
Middle	Locs., 1075, 1080, 1081 and others San Diego fm., San Diego, Calif.	TYPES: P. kanakoffi, 2122 P. kennelli, 2127; Miosula recentior, 2117; Brachyramphus pliocenus, 2119; Colymbus subparvus, 2568; Gavia howardae	type case
		Miscellaneous specimens Mounted Mancalla	VIII-24 Mez.Exhib
Lower	Loc. 1067, Corona del Mar, Calif.	TYPE P. felthami, 2037 Miscellaneous sps.	type VIII-24
Lower	Loc. , Ricardo, Calif. (Clarendonian) Chassee 208	2 frags. humerus, galliform	IX - 11
Lower	Loc. , FishLake Valley, Nev. (Clarendonian) Downs 325 (V2804)	Frag. tibiotarsus, passerine?	IX 14
Hemphillia	Loc. 62, Rome, Oregon (Malheur Co.)	Several, some ident. and recorded by L. Miller	IX-19
"	Loc. 63, Thousand Creek, Nev.	Ducks, geese, grebe (9)	IX-22
"	Loc. 49, Pozo Creek, Kern Co., Calif.	No. 454 TYPE humerus Sarcoramphus kernense Miller TYPE	

Avian fossils, LACM, continued - p. 3

	Locality	Material	Case
PLIOCENE continued			
Hemphillian	Locs. 289 and 276, Rincon, Mexico	Misc. sps.	Research
		TYPE Phoenicopterus stocki (tibiotarsus) Miller	Type
"	Loc. 286, Yepomera, Chihuahua	Nos. 4618-4620 duck	Research
Low.Blancan	Loc. CIT 505 = LACM 1136 Michoacan, Goleta fm., Mexico	nos. 3166, and 4632, small coramoran	Research
Blancan	Loc. 460, Wikieup, Arizona	Nos. 3964-3998 misc.	XX-2x X-16
"	Loc. 110, San Pedro Valley, Ariz.	Misc.	X-16
"	Loc. 118 Snake River, Idaho	8 bones (2 recorded Miller)	X-20
"	Loc. 122, Barbour Ranch, east of Brunneau, Idaho	8 bones (4 recorded Miller)	X-20
"	Loc. , Grand View, Idaho	2 frags.	X-20
"	Loc. 1842, So. Brunneau, Idaho	no. 5524, grebe, humerus	X-20
"	Loc. , Shoofly Creek, Brunneau Idaho (from U. Calif.)	no. 4711, tarsus, grebe	X-20
"	Loc. 131 Coso Mts., Inyo Co., Calif.	Eagle phalanx & coracoid	X-18
"	Loc. 1182, Coso Mts., "	" , Calif. No. 2808 Cormorant humerus	X-18

MIOCENE

Fossil Birds in the Collections of the Los Angeles County Museum

AGE	LOCALITY	MATERIAL	CASE
Cretaceous	So. Dak. Kansas	3 femora, vertebrae vertebrae	
Eocene (Wasatch)	Loc. 230, Cody, Wyo.	#4652, tibia (dist.)	Crane? III-8
Eocene (Uintan)	Loc. 180, Tapo Ranch, Ventura Co., Calif.	bird? scapula?	III-14
Eocene (Uintan)	Loc. 1723, San Diego, Calif. (Poway fm.)	Protostrix californiensis #6171 TYPE humerus	TYPE CASE
Eocene (Uintan)	Loc. 1877, San Diego, Calif. (Poway fm.)	Gruiformes #2851, tibiotarsus	III-16
Eocene (Uintan)	Loc. 249, Poway fm., San Diego, Calif.	bird? tiny bone	III-16
Oligocene (Whitneyan)	Loc. Up Brule fm.	So. Dak. Galliform humerus	IV-20
Miocene (Arikareean)	Loc. 1821, Shapp's fm. So. Dak.	#9357 hawk tibia (dist)	V-14
Miocene (Arikareean)	Loc. 1982, Shapr(s fm. So. Dak.	# galliform (grouse?) humerus (prox.)	V-14
Miocene (Arikareean)	Loc. 201, Vasquez Canyon, Calif. (Tick Cany. fm)	<u>Michierax stocki</u>	TYPE
Miocene (Barstovian)	Locs. 1090, 1091, Barstow syncline, Calif.	#1396 foot bones ident. by L. Miller Condor, 1952:296 7 duck, 1 hawk	Case
Miocene (Mohnian) (Hemingfordian?)	Loc. 1127, Tepusquet Canyon, Sta. Barbara Co., Calif.	<u>Paleoscinius turdirostris</u> TYPE 2 slabs with skel- #2604 - eton and feather impres.	TYF CAS
Miocene (Late?)	Loc. 1018, Lompoc, Calif.	#880, <u>Puffinus diatomicus</u> impression on shale	EXHIBIT
Miocene (Middle)	Locs. Sharktooth Hill, Calif.	unidentified 15 or more bones	V-24
Miocene (Middle?)	Loc. Balcom Canyon, Calif. (Ventura Co.)	#2706 <u>Puffinus</u> in shale	V-24
Miocene	Loc. 1875, Orange Co., Calif. Capistrano fm.	<u>Puffinus</u> (poor) in shale; #6135	V-24
Miocene (Modelo)	Calabasas, Calif.	CAST Type, <u>Phalacrocorax</u> femoralis	EXHIBIT
Miocene (Up.	Loc. Lomita, Calif.	#2012 incomplete humerus large loon	
Miocene	Loc. 1267 Sherman Oaks Calif. (Delgado Drive)	2704 <u>Sula willetti</u> frags. 2705 <u>Puffinus diatomicus</u> frag 2707 <u>Osteodontornis</u> jaws & atlas	V-24
Miocene	Doc. San Fernanodo Valley, Calif.	#2703 <u>Puffinus</u> on slab	V-24
Miocene	Loc. 1752, Encino, Calif.	#5001 sulid on slabs	V-24

AGE	LOCALITY	MATERIAL	CASE
Miocene	Loc.1229, Studio City Calif.	* <u>Sula pohli</u> TYPE part skel. on slab	TYPE CASE
Miocene	Loc. 1229, Studio City	* <u>Sula pohli</u> , humerus	V-24
Miocene	Loc.1894A, Beverly Glen Canyon, L.A.Co.,calif.	#7320 bird pelvis,slab	V-24
Miocene	Loc. Under Mulholland Dr., cut on S.Diego	black slab with	V-24
Miocene	freeway, Calif. (LA.)	2 wing bones of bird	
Miocene	Loc. Pt. Fermin,Calif.	impressed foot bones * Rallidae?	V-24
Miocene	Loc. El Sereno, Calif.	*#2533, humerus <u>Paleosula stocktoni</u>	V-24
Miocene (Barstovian)	Loc. 44 Sucker Creek, Malheur Co., Oreg.	5741 femur unident. 5742 doubtfully bird	VI-8
Pliocene (Clarendonian)	Loc. Ricardo,Calif. (Ricardo fm.)	prox.& dist. ends humerus, galliform	IX-11
Pliocene (Clarendonian)	Loc. Fish Lake Valley, Nev.(Esmeraldo fm.)	passerine tibia TD325 (dist.)	IX-19
Pliocene (Hemphillian)	Loc. 63, Thousand Cr., Nevada	ducks, geese, grebe 9 bones (catalogued)	IX-22
Pliocene (Hemphillian)	Locs.61-62, Rome, Oreg.	*29 recorded by Miller 16 unrecorded	IX-19
Pliocene (Hemphillian)	Loc.49, Pozo Creek, Calif.(Kern Riv)	* <u>Sarcoramphus kernense</u> #454 humerus (dist.)	TYPE CASE
Pliocene (Hemphillian)	Locs.276 &289, Rincon Mexico	19 unidentified bones (catalogued)	Temp. Office
Pliocene (Hemphillian)	Loc. 289, Rincon, Mex.	* <u>Phoenicopterus stocki</u> TYPE dist. end tibiae #3245	TYPE CASE
Pliocene (Hemphillian)	Loc. 286, Yepomera, Mex.	#'s 4618-4620 3 duck bones (one sp.)	Temp. Office
Pliocene (L. Blancan)	Loc.505, Michoacan, Mex. (Goleta Fm.)	2 cormorant bones 3166 & 4632	Temp. Office
Pliocene (L. Blancan)	Loc.460 Wikiepp, Ariz.	#'s 3964-3988 (unidt.)	X-16
Pliocene (L. Blancan)	Loc.110, San Pedro Valley Ariz.	18 catalogued but unident. bones	X-16
Pliocene (Blancan)	Loc. 131, Coso Mts., Calif.	Eagle phalanx; small coracoid	X-18
Pliocene (Blancan)	Loc.1182 Coso Mts., Calif.	#2808 cormorant Hum.	X-18
Pliocene (Blancan)	Loc.118, Snake Riv. Idaho	*#3231 Crane (Miller, 1944 and 7 unrecorded	X-20
Pliocene (Blancan)	Loc. 122, Barbour Ranch, nr. Brunneau, Idaho	*5 Ciconia, & 4 others rec'd Miller 1944	X-20
Pliocene (Blancan)	Loc.1842, So. Brunneau coll. 1963	#5524 humerus (grebe?)	X-20
Pliocene (Blancan)	Loc. Grand View, Idaho	tarsus and radius	X-20
Pliocene (Blancan)	Loc. Shoofly Cr., Idaho	#4711, tarsus grebe	X-20
Pliocene (Repetto fm)	Loc.1067 Corona del Mar	#TYPE Puffinus felthami #2037 humerus	TYPE CASE
"	"	Some recorded, some not <u>Mancella</u>	VIII-24

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"	Loc. 249, Poway fm., San Diego, Calif.	Sp? small frag.	III-16
OLIGOCENE			
Whitneyan	Loc. Up. Brule; Wounded Knee area, So. Dakota (field no. JRM 1467)	humerus and ungual, small grouselike galliform	IV-20
MIOCENE			
Arikareean	Locs. 1821 and 1982, Sharp's fm. So. Dakota	No. 9357 hawk tibiotarsus humerus (no.?) grouse?	V-14
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"Mohnian"	Loc. 1127 Tepusquet Canyon, Calif.	TYPE slabs Palaeoscinius turdi- ristris Howard, no. 2604	Type
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	Loc. Old Topanga Rd. & Ventura Blvd. L.A. Co., Calif.	No. 2703, shearwater slab	V-24
	Loc. Balcom Canyon, Ventura, Co., Calif.	no. 2706, shearwater	V-24
	Loc. 1267 Sepulveda-Ventura Blvd., L.A. Co., Calif.	No. 2707 Osteodontornis jaw No. 2705 P. diatomicus No. 2704 S. willetti	V-24
	Loc. 1752, 4 mi. so. Ventura frwy, Calif.	Encino No. 5001, sulid in slabs	V-24
	Loc. 1894A, Beverly Glen Canyon, Calif.	No. 7320, pelvis, slab.	V-24
	Loc. S. Diego frwy nr Mulholland Dr. cut, L.A. Co., Calif.	unident. small bones	V-24

Avian fossils in LACM collections, continued - p. 2

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Loc.	Pt. Fermin, Calif.	no. 2891 footbones recorded as "Rallidae"	V-24
Loc.	El Sereno, near Round Drive and Chester St.	no. 2533 solid humerus on which genus Paleosula erected for S. stocktoni	V -24
Loc. 1875	Orange Co., Calif. Capistrano fm.	no. 6135 shearwater on 2 slabs (poor)	V-24
loc. 1018	Lompoc, Calif.	no. 880 P. diatomicus slab	Mez.Exhib.
Loc. 1945	"Leisure World", ElToro, Calif.	many, unidentified	

PLIOCENE

Middle	Locs., 1075, 1080, 1081 and others San Diego fm., San Diego, Calif.	TYPES: P. kanakoffi, 2122 P. kennelli, 2127; Miosula recentior, 2117; Brachyramphus pliocenus, 2119; Colymbus subparvus, 2568; Gavia howardae	type case
		Miscellaneous specimens Mounted Mancalla	VIII-24 Mez.Exhib
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Lower	Loc. , Ricardo, Calif. (Clarendonian) Chassee 208	2 frags. humerus, galliform	IX - 11
Lower	Loc. , FishLake Valley, Nev. (Clarendonian) Downs 325 (V2804)	Frag. tibiotarsus, passerine?	IX 14
Hemphillia	Loc. 62, Rome, Oregon (Malheur Co.)	Several, some ident. and recorded by L. Miller	IX-19
"	Loc. 63, Thousand Creek, Nev.	Ducks, geese, grebe (9)	IX-22
"	Loc. 49, Pozo Creek, Kern Co., Calif.	No. 454 TYPE humerus Sarcoramphus kernense Miller	Type

Avian fossils, LACM, continued - p. 3

	Locality	Material	Case
PLIOCENE continued			
Hemphillian	Locs. 289 and 276, Rincon, Mexico	Misc. sps.	Research
		TYPE Phoenicopterus stocki (tibiotarsus) Miller	Type
"	Loc. 286, Yepomera, Chihuahua	Nos. 4618-4620 duck	Research
Low.Blancan	Loc. CIT 505 = LACM 1136 Michoacan, Goleta fm., Mexico	nos. 3166, and 4632, small coramoran	Research
Blancan	Loc. 460, Wikieup, Arizona	Nos. 3964-3998 misc.	IX-2x X-16
"	Loc. 110, San Pedro Valley, Ariz.	Misc.	X-16
"	Loc. 118 Snake River, Idaho	8 bones (2 recorded Miller)	X -20
"	Loc. 122, Barbour Ranch, east of Brunneau, Idaho	8 bones (4 recorded Miller)	X-20
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"	Loc. 1842, So. Brunneau, Idaho	no. 5524, grebe, humerus	X-20
"	Loc. , Shoofly Creek, Brunneau Idaho (from U. Calif.)	no. 4711, tarsus, grebe	X-20
"	Loc. 131 Coso Mts., Inyo Co., Calif.	Eagle phalanx & coracoid	X-18
"	Loc. 1182, Coso Mts., " , Calif.	No. 2808 Cormorant humerus	X-18

IIOCENE

Fossil Birds in the Collections of the Los Angeles County Museum

AGE	LOCALITY	MATERIAL	CASE
Cretaceous	So. Dak. Kansas	3 femora, vertebrae vertebrae	
Eocene (Wasatch)	Loc. 230, Cody, Wyo.	#4652, tibia (dist.)	Crane? III-8
Eocene (Uintan)	Loc. 180, Tape Ranch, Ventura Co., Calif.	bird? scapula?	III-14
Eocene (Uintan)	Loc. 1723, San Diego, Calif. (Poway fm.)	Protostrix californiensis #6171 TYPE humerus	TYPE CASE
Eocene (Uintan)	Loc. 1877, San Diego, Calif. (Poway fm.)	Gruiformes #2851, tibiotarsus	III-16
Eocene (Uintan)	Loc. 249, Poway fm., San Diego, Calif.	bird? tiny bone	III-16
Oligocene (Whitneyan)	Loc. Up Brule fm.	So. Dak. Galliform humerus	IV-20
Miocene (Arikareean)	Loc. 1821, Shapp's fm. So. Dak.	#9357 hawk tibia (dist)	V-14
Miocene (Arikareean)	Loc. 1982, Shapr(s fm. So. Dak.	# galliform (grouse?) humerus (prox.)	V-14
Miocene (Arikareean)	Loc. 201, Vasquez Canyon, Calif. (Tick Canyon fm)	<u>Michierax stocki</u> #1396 foot bones	TYPE Case
Miocene (Barstovian)	Locs. 1090, 1091, Barstow syncline, Calif.	ident. by L. Miller Condor, 1952:296 7 duck, 1 hawk	
Miocene (Mohnian) (Hemingfordian?)	Loc. 1127, Tepusquet Canyon, Sta. Barbara Co., Calif.	<u>Paleoscinis turdirostris</u> TYPE 2 slabs with skel- #2604 - eton and feather impres.	TYPE CASE
Miocene (Late?)	Loc. 1018, Lompoc, Calif.	#880, <u>Puffinus diatomicus</u> impression on shale	EXHIBIT
Miocene (Middle)	Locs. Sharktooth Hill, Calif.	unidentified 15 or more bones	V-24
Miocene (Middle?)	Loc. Balcom Canyon, Calif. (Ventura Co.)	#2706 <u>Puffinus</u> in shale	V-24
Miocene	Loc. 1875, Orange Co., Calif. Capistrano fm.	<u>Puffinus</u> (poor) in shale; #6135	V-24
Miocene (Modelo)	Calabasas, Calif.	CAST Type, <u>Phalacrocorax</u> femoralis	EXHIBIT
Miocene (Up.)	Loc. Lomita, Calif.	#2012 incomplete humerus large loon	
Miocene	Loc. 1267 Sherman Oaks Calif. (Delgado Drive)	2704 <u>Sula willetti</u> frags. 2705 <u>Puffinus diatomicus</u> frag. 2707 <u>Osteodontornis</u> jaws & atlas	V-24
Miocene	Doc. San Fernando Valley, Calif.	#2703 <u>Puffinus</u> on slab	V-24
Miocene	Loc. 1752, Encino, Calif.	#5001 sulid on slabs	V-24

Avian Fossil Localities represented in the Collections of the L.A. Co. Museum

Published records refer to accompanying Bibliography. Where many papers have been published on the locality, the latest overall work is cited (which contains bibliography of former work)

PLEISTOCENE

Locality	Loc.no.	No. species	No. bones	Publication
31B Rancho La Brea		133	87,000	Stock, 1961
3/37-38 McKittrick	CIT 138	66 (plus)	16,000 ident 4,600 unident	DeMay, 1941
Room 40 McKittrick	1948 coll.			unrecorded
B Carpinteria	CIT	60 (plus) → 2400	(includes Sta B. coll. & C. La)	DeMay, 1941
3 Conkling Cavern	LAM	24		Howard & A. Miller 1933
3 Shelter Cave, New Mexico	LAM	83		op. cit. H and M.
B Smith Creek Cave, Nev.	CIT	50	482	Howard, 1952
3 Smith Creek Cave, Nev.	LAM, 1955			unrecorded
B San Josecito Cav., Mexico	CIT 192	43 plus more?		L. Miller, 1943
3 San Josecito Cav., Mex.	CIT 192			unrecorded
3 { Santa Rosa Id., Calif.		3	8	Howard, 1944
3 { Santa Rosa Id., Calif.				unrecorded
B22 Stone Man Cave, Shasta Co., Calif.	CIT 414	3 age?	5	Furlong, 1941
3 Little Hatchet Mt. Cave, New Mex.	LAM	19	181	Howard, 1962
3/30A Fossil Lake, Oregon	CIT 137	21	55	Howard, 1946
3a Schilling Cave, Calif.	LAM	15	29	Downs, Howard, Clement Smith, 1955
45E Lago de Chapala, Mex. locs. 1129, 1176, 1283		2	6	Downs,
45E Lago de Chapala " " " " "		more?	11	unrecorded
3/1002 Playa del Rey, Calif.	LAM	9	40	Howard, 1936 (1955) 1949
3 Harbor Freeway cut, 112th St.	LAM. 1295	1 (plus?)		unrecorded
3 Newport Bay, Calif.	LAM 1066	19	72	Howard, 1949 & 1958 some unrecorded?
3/21B Bixby Slough, Hermosa Beach, Calif.	LAM 1055	1	1	Howard, 1944 from 20 H chondytes
3/21B Imperial H'wy, La Habra, Calif.		1	1	Howard, 1944 1936? md. 2009 LAM cond 38/249
2 Waterman & Alhambra Sts., L.A.		1	2	Howard, 1944 1936 LAM# 981, 982 Tanager
3/401 Dark Canyon Cave, New Mexico				unrecorded
3/21B San Pedro	CIT 186, CIT # ? chondytes ✓ P. Rio. LAM	6	8	Howard, 1949 & 1944
3/21B Sexton Canyon, Ventura Co.,	CIT 211	1		Miller, L. 1934
✓ LAM 1058 quail bones (not) muddled with no # (1944 H)				1 chondytes (Lam) #1670
✓ LAM 1067 from 2014 chondytes				
✓ LAM 1026 + b, 2010				
✓ LAM 1012 rad 683 B, can, 684 carb. Fulica				

Avian Fossil Localities LACO.MUs. continued

PLEISTOCENE continued

Locality	Loc.No.	No.sps.	Nobones	Publications
3 { Anacapa Id., Calif. LAM		1		Mitchell, Lipps
3 { Anacapa Id., Calif. LAM			many	Miller, 1961
3 ^{over} San Nicolas Id. LAM 1085		only rec'd 3 (3?)		unrecorded
3 ^{By Cape San} Lomita, Calif. LAM 1053 ^{Leon 2012}		2 ^{check}		Howard, 1955
45 L Municipio de Tequixquiac CIT 308-311		4 (plus	11	unrecorded
3/can 1 Vallecito, Calif. LAM		12 (plus)	34	unrecorded
3 Manix Lake, Calif. LAM 1093 (CIT 5401)		12	28	except Downs abstract
Vermont Ave + Sepulveda Blvd, LAM		1	1	Howard, 1955

Unident San Nicolas Id

2 small hum 237, 2322, 2374

coast 2816

tarsal peg 2414

dist fib - no #

sh " no #

frag tars & fem unident, (near
ulna Puffins st no #

EOCENE

7	Cody, Woming	CIT 230	1	1	unrecorded
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17
18
20

Avian Fossil localities represented in the Los Angeles County Museum Collections

Published records are the most recent overall survey containing bibliog. of former publications

Pleistocene

Locality	Age	No.sps.	No.bones	Where pub'd
Rancho La Brea	Up Pleistocene	133	87,000	Stock, 1961.
McKittrick (138) McKittrick	Upper Pleist.			DeMay, 1941

Avian Fossil localities LACOMus. continued

PLIOEENE

Locality	loc.no.	no. sps.	No. bones	Publication
3/22 } Dry Creek, Oregon " " " "	CIT 62	5	19 16-17	Miller, 1944 unrecorded
3/26L { Snake River, Idaho (CIT 118 & 122) " " " "	" "	4	8 7	Miller, 1944 unrecorded
24G Thousand Creek, Nevada	CIT 63	3-4?	7	unrecorded
3 { San Diego, Calif. LAM " " " " LAM	" "	10	139	Howard, 1949 Miller & Bowman, 1958
3 Corona del Mar, Calif. LAM 1067	" "	2	14	Howard, 1949
3 San Diego, Calif. LAM	" "	"	?	unrecorded
? Pozo Creek, Kern Co., Calif. CIT 49	" "	2	2	Miller, 1931
41A Rincon, Mexico CIT 276, 286, 289	" "	1	19	Miller, 1944
" " CIT 276, 286, 289	" "	2	7	unrecorded
3/43L Morelia, Michoacan, Mex, CIT 505, LAM 1136	" "	2	2	unrecorded
3/30H San Pedro Valley, Arizona CIT 110?	" "	4 plus	11	unrecorded
3/25Q Wickieup, Arizona CIT 460	" "	5 plus	35	unrecorded?
But case 2 Packard's Hole, Sta Barbara LAM 1013	" "	1	1	Phal. sp. Howard 1931

MIOCENE

3 Tepusquet Canyon, Calif. LAM. 1127	1	1	Howard, 1957
type Vasquez Canyon, Calif. CIT 201	1	5	Howard, 1944
3 Barstow, Calif. LAM 1091, 1090 & ?	2 (plus)	10	Miller, 1952 7 mcd
3 Sherman Oaks, Calif. LAM	2	2	Howard, 1962 (2)
3 Ventura Blvd, San Fernando Valley LAM 1229	1	2	Howard, 1958
3 Ventura County LAM	1	1	unrecorded
3 San Fernando Valley (Puffinus)	1	1	unrecorded
8 El Sereno, Calif. LAM Riverside Dist. Mr. Chestnut	1	1	Howard, 1958
3/2 Pf. Lamin LAM	1	1	1944

1 ulna dist
1 claw
1 femur dist
Bawson 4 cora tops, 1 cora dist
1 humerus dist
1 tibia

Avain Fossil Localities, continued

PLEISTOCENE continued

Locality	Loc. No.	No. Species	No. Bones	Publication
San Nicolas Id.	LAM 1085			Howard, 1955
Lomita, Calif.	LAM	1	1	
Municipio de Tequixquiac	CIT 308-311	4(plus)	11	unrecorded
Vallecito, Calif.	LAM	12(plus)	34	unrecorded

FOSSIL BIRD TYPES

In the Collections of the Los Angeles County Museum
Colymbus subparvus Miller & Bowman San Diego Pliocene ^{La 1080} Femur no. 2586

Gavia howardae Brodkorb	San Diego Pliocene ^{La 1071} Humerus no. 2111
Puffinus felthami Howard	Corona del Mar Pliocene ^{La 1067} Humerus no. 2007
Puffinus kanakoffi Howard	San Diego Pliocene ^{La 1080} Tarsometatarsus no. 2122
Sula pohli Howard	Sherman Oaks, Miocene ^{La 1229} Wing bones on slab 2674
Moris reyna Howard	Playa del Rey, Pleist. ^{La 1024} Coracoid no. 991
Miosula recentior Howard	San Diego Pliocene ^{La 1071} Tibiotarsus no. 2117
Phalacrocorax kennelli Howard	San Diego Pliocene ^{La 1080} Coracoid no. 2127
Mycteria wetmorei Howard	Rancho La Brea, Pleist. ^{acid pit} Frag. rostrum, K3527
Phoenicopterus stocki Miller	Rincon, Chihuahua, Mex. ^{La 289} Plio. Tibiotarsus CIT 3245
Phoenicopterus minutus Howard	Manix Lake, Pleisto. ^{La 1080} Tibia & tarsometatarsus no. 2445
① → Anabernicula gracilenta Ross	McKittrick, Pleisto. ^{La 1085} Tarsometatarsus CIT 1169
② → Chendytes milleri Howard	San Nicolas Id, Pleisto. ^{La 1085} Humerus no. 2364
③ → Teratornis incredibilis Howard	Smith Cr. Cav., Nev. ^{La 251} Pleist. Cuneiform CIT 5067
Sarcoramphus kernensis (Miller)	Pozo Cr., Kern Co. Cal. ^{La 49} Plio. Humerus CIT 454
Wetmoregyps daggetti (Miller)	Rancho La Brea, Pleisto. ^{La 1080} Tarsometatarsus K3114
④ → Spizaetus willetti Howard	Smith Cr. Cav., Nev. ^{La 251} Pleist. Tarsometatarsus CIT 1791
Michlerax stocki Howard	Vasquez Canyon, Miocene ^{La 281} Tarsometatarsus & phalanges CIT 1396
Caracara prelutosus (Howard)	Rancho La Brea, Pleist. ^{La 1080} Humerus E4398
Caracara p. grinnelli (Howard)	San Josecito Cav., Mex. ^{La 192} Pleist. Tarsomet. CIT 2709
⑤ → Meleagris crassipes Miller	San Josecito Cav., Mex. ^{La 192} Pleist. Tarsomet. CIT 2708
⑥ → Epirallus natator Miller	" " " " " Tarsometatarsus CIT 2943
Palnumenius victima Miller	" " " " " Tarsometatarsus CIT 2944
Brachyramphus pliocenensis Howard	San Diego Pliocene ^{La 1080} Humerus no. 2119
Geococcyx conklingi Howard	Conkling Cav., N. Mex. ^{La 1009} Pleist. Humerus 118, femur 113 & ulna 119
⑦ → Strix brea Howard	Rancho La Brea Pleist. ^{La 1080} Tarsometatarsus E9379
Paleoscinis turdirostris Howard	Tepusquet Canyon, Calif. ^{La 1127} Mio. Skel. no. 2604
Pandanaris convexa Miller	Rancho La Brea Pleist. ^{La 1080} Rostrum K7278
Pyeloramphus molothroides Miller	Shelter Cave, Pleist. ^{La 1128} Lower Mandible no. 320
Pipilo angelensis Dawson	Rancho La Brea Pleist. ^{La 1080} Rostrum K7291

⑦ → Asio priscus Howard ^{Arlington Canyon} Santa Rosa Island, Pleistocene ^{La 106} Tibiotarsus, no. 4712

NOTE: Numbers with CIT were cataloged in the Calif. Institute of Technology Collection, which is now part of the Los Angeles Co. Museum collections

August 10, 1962

① Branta dorsalis	Vallecito Creek, Calif. ^{Mid. Pleist} ^{La 1323} Humerus no. 3911, Paratyphlocyba no. 3920
③ Oxyura bessoni Howard	Vallecito Creek, Calif. ^{La 1324} Carpometatarsus no. 2785
② Bucephala fossilis "	" " " " ^{La 1430} " no. 2789
④ Neophrontops vallecitoensis Howard	" " " " ^{La 1299} Tarsometatarsus, M. and S.
⑤ Agelaius arizonae Howard	" " " " ^{La 1358} Pedal phalanges, no. 2866
⑥ Salicinctes hesternus Howard	" " " " ^{La 1433} Tibiotarsus, no. 2873

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through 1962

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Fossil Birds in the Collections of the Los Angeles County Museum

* refers to recorded material

AGE	LOCALITY	MATERIAL	CASE
Cretaceous	So. Dak. Kansas	3 femora, vertebrae vertebrae	
Eocene (Wasatch)	Loc. 230, Cody, Wyo.	#4652, tibia (dist.)	Crane? III-8
Eocene (Uintan)	Loc. 180, Tapo Ranch, Ventura Co., Calif.	bird? scapula?	III-14
Eocene (Uintan)	Loc. 1723, San Diego, Calif. (Poway fm.)	<u>Protostrix californiensis</u> * #6171 TYPE humerus	TYPE CASE
Eocene (Uintan)	Loc. 1877, San Diego, Calif. (Poway fm.)	* Gruiformes # 2851, tibiotarsus	III-16
Eocene (Uintan)	Loc. 249, Poway fm. San Diego, Calif.	bird? tiny bone	III-16
Oligocene (Whitneyan)	Loc. Up Brule fm. So. Dak.	Galliform humerus	IV-20
Miocene (Arikareean)	Loc. 1821, Shapp's fm. So. Dak.	#9357 hawk tibia (dist)	V-14
Miocene (Arikareean)	Loc. 1982, Shapr(s fm. So. Dak.	# galliform (grouse?) humerus (prox.)	V-14
Miocene (Arikareean)	Loc. 201, Vasquez Canyon, Calif. (Tick Cany. fm)	<u>Michierax stocki</u> #1396 foot bones	TYPE Case
Miocene (Barstovian)	Locs. 1090, 1091, Barstow syncline, Calif.	* ident. by L. Miller Condor, 1952:296 7 duck, 1 hawk	
Miocene (Mohnian) (Hemingfordian?)	Loc. 1127, Tepusquet Canyon, Sta. Barbara Co., Calif.	* <u>Paleoscenis turdirostris</u> TYPE 2 slabs with skel- #2604 - eton and feather impres.	TYPE CASE
Miocene (Late?)	Loc. 1018, Lompoc, Calif.	* #880, <u>Puffinus diatomicus</u> impression on shale	EXHIBIT
Miocene (Middle)	Locs. Sharktooth Hill, Calif.	unidentified 15 or more bones	V-24
Miocene (Middle?)	Loc. Balcom Canyon, Calif. (Ventura Co.)	#2706 <u>Puffinus</u> in shale	V-24
Miocene	Loc. 1875, Orange Co., Calif. Capistrano fm.	<u>Puffinus</u> (poor) in shale; #6135	V-24
Miocene (Modelo)	Calabasas, Calif.	* CAST Type, <u>Phalacrocorax</u> femoralis	EXHIBIT
Miocene (Up.	Loc. Lomita, Calif.	#2012 incomplete humerus large loon	
Miocene	Loc. 1267 Sherman Oaks Calif. (Delgado Drive)	*2704 <u>Sula willetti</u> frags. *2705 <u>Puffinus diatomicus</u> frag. *2707 <u>Osteodontornis</u> jaws & atlas	V-24
Miocene	Loc. San Fernando Valley, Calif.	#2703 <u>Puffinus</u> on slab	V-24
Miocene	Loc. 1752, Encino, Calif.	#5001 sulid on slabs	V-24

AGE	LOCALITY	MATERIAL	CASE
Miocene	Loc.1229, Studio City Calif.	* <u>Sula pohli</u> TYPE part skel. on slab	TYPE CASE
Miocene	Loc. 1229, Studio City	* <u>Sula pohli</u> , humerus	V-24
Miocene	Loc.1894A, Beverly Glen Canyon, L.A.Co.,calif.	#7320 bird pelvis,slab	V-24
Miocene	Loc. Under Mulholland Dr., cut on S.Diego freeway, Calif. (LA.)	black slab with 2 wing bones of bird	V-24
Miocene	Loc. Pt. Fermin,Calif.	impressed foot bones * Rallidae?	V-24
Miocene	Loc. El Sereno, Calif.	*#2533, humerus <u>Paleosula stocktoni</u>	V-24
Miocene (Barstovian)	Loc. 44 Sucker Creek, Malheur Co., Oreg.	5741 femur unident. 5742 doubtfully bird	VI-8
Pliocene (Clarendonian)	Loc. Ricardo,Calif. (Ricardo fm.)	prox.& dist. ends humerus, galliform	IX-11
Pliocene (Clarendonian)	Loc. Fish Lake Valley, Nev.(Esmeraldo fm.)	passerine tibia TD325 (dist.)	IX-19
Pliocene (Hemphillian)	Loc. 63, Thousand Cr., Nevada	ducks, geese, grebe 9 bones (catalogued)	IX-22
Pliocene (Hemphillian)	Locs.61-62, Rome, Oreg.	*29 recorded by Miller 16 unrecorded	IX-19
Pliocene (Hemphillian)	Loc.49, Pozo Creek, Calif.(Kern Riv)	* <u>Sarcoramphus kernense</u> #454 humerus (dist.)	TYPE CASE
Pliocene (Hemphillian)	Locs.276 &289, Rincon Mexico	19 unidentified bones (catalogued)	Temp. Office
Pliocene (Hemphillian)	Loc 289, Rincon, Mex.	* <u>Phoenicopterus stocki</u> TYPE dist. end tibiae #3245	TYPE CASE
Pliocene (Hemphillian)	Loc. 286, Yepomera, Mex.	#'s 4618-4620 3 duck bones (one sp.)	Temp. Office
Pliocene (L. Blancan)	Loc.505, Michoacan, Mex. (Goleta Fm.)	2 cormorant bones 3166 & 4632	Temp. Office
Pliocene (L. Blancan)	Loc.460 Wikiepp, Ariz.	#'s 3964-3988 (unidt.)	X-16
Pliocene (L. Blancan)	Loc.110, San Pedro Valley Ariz.	18 catalogued but unident. bones	X-16
Pliocene (Blancan)	Loc. 131, Coso Mts., Calif.	Eagle phalanx; small coracoid	X-18
Pliocene (Blancan)	Loc.1182 Coso Mts., Calif.	#2808 cormorant Hum.	X-18
Pliocene (Blancan)	Loc.118, Snake Riv. Idaho	*#3231 Crane (Miller, 1944 and 7 unrecorded	X-20
Pliocene (Blancan)	Loc. 122, Barbour Ranch, nr. Brunneau, Idaho	*5 Ciconia, & 4 others rec'd Miller 1944	X-20
Pliocene (Blancan)	Loc.1842, So. Brunneau coll. 1963	#5524 humerus (grebe?)	X-20
Pliocene (Blancan)	Loc. Grand View, Idaho	tarsus and radius	X-20
Pliocene (Blancan)	Loc. Shoofly Cr., Idaho	#4711, tarsus grebe	X-20
Pliocene (Repetto fm)	Loc.1067 Corona del Mar	#TYPE Puffinus felthami #2037 humerus	TYPE CASE
"	"	Some recorded, some not <u>Mancalla</u>	VIII-24

Avian Fossils in Collections of Los Angeles County Museum

Age	Locality	Material	Case
CRETACEOUS	Loc. 1963, Buffalo Gap, So. Dakota	Three sizes Hesperornis femora; vertebrae, patella	Misc. unident.
EOCENE			
Wasatch	Loc. 230, Cody, Wyo.	no. 4652 gruiform tibiotarsus, (Paragus?) and 2 other fragments	III-8
"	Loc. <i>Green River</i>	<i>feather impressions</i>	III-12
Uintan	Loc. 180, Tapo Ranch, Ventura Co., Calif.	Unidentified scap.	III-14
"	Loc. 1723, Poway fm., San Diego, Calif.	TYPE humerus Protostrix californiensis Howard 6171	Type
"	Loc. 1877 Poway fm., San Diego, Calif.	No. 2851 Gruiform tibiotarsus	III-16
"	Loc. 249, Poway fm., San Diego, Calif.	Sp? small frag.	III-16
OLIGOCENE			
Whitneyan	Loc. Up. Brule; Wounded Knee area, So. Dakota (field no. JRM 1467)	humerus and ungual, small grouselike galliform	IV-20
MIOCENE			
Arikareean	Locs. 1821 and 1982, Sharp's fm. So. Dakota	No. 9357 <i>Arikarornis macdonaldi</i> hawk tibiotarsus humerus (no. 9388 grouse <i>Montez delaware (quail)</i>)	Type Case V-14
"	Loc. 2013, Vasquez Canyon, Calif. Tick Canyon fm.	TYPE foot bones Michierax stocki Howard, 1396	Type
"	Locs. Sharktooth Hill	Many in process of ident.	V-24
"Mohnian"	Loc. 1127 Tepusquet Canyon, Calif.	TYPE slabs Palaeosciniis turdi- ristris Howard, no. 2604	Type
"	Loc. 1945, "Leisure World", Eltoro, Calif.	Many in process ident.	Reesa
Barstovian	Loc. CIT 44 Sucker Creek, Malheur Co. Oregon	No. 5741 femur, sp.? 5742 doubtfully bird	VI-8
"	Locs. 1090, 1091, Barstow, Calif.	Several recorded Miller	VI-23
"	Loc. Old Topanga Rd. & Ventura Blvd. L.A. Co., Calif.	No. 2703, shearwater slab	V-24
"	Loc. Balcom Canyon, Ventura, Co., Calif.	no. 2706, shearwater	V-24
"	Loc. 1267 Sepulveda-Ventura Blvd., L.A. Co., Calif.	No. 2707 Osteodontornis jaw No. 2705 P. diatomicus No. 2704 S. willetti	V-24 V-24 V-24
"	Loc. 1752, 4 mi. so. Ventura frwy, Calif. <i>Larry Green</i>	No. 5001, solid in slabs	V-24
"	Loc. 1894A, Beverly Glen Canyon, Calif.	No. 7320, pelvis, slab.	V-24
"	Loc. S. Diego frwy nr Mulholland Dr. cut, L.A. Co., Calif.	unident. small bones	V-24

Van Dine Quad 1953
Lat 34° 08' 45" N
Long. 118° 28' 20" W
T. 1N, R. 15W

Lomita Ave off
of Oak Drive
45 mi. so. of town
Meyers Blvd. Trail

up to 5
X-ray only
small
old photo

Momolompecanus (?) in mss. June 1966

MIOCENE continued	Locality	Material	Case
Van Syp Gnd 1926 T.N. R. 184 S. Bannockburn N 250W of hole 1024 St. Louis W. Coldwater Canyon Ventura Blvd.	Loc. 1229, Whitsett-Laurel Canyon; L.A.Co., Calif.	no. 2532, sulid humerus referred S. pohli, Howard	V-24
	Loc. 1229 Whitsett-Coldwater "	no. 2674, TYPE slab Sula pohli Howard	Type
	Loc. Pt. Fermin, Calif.	no. 2891 footbones recorded as "Rallidae"	V-24
	Loc. El Sereno, near Round Drive and Chester St.	no. 2533 sulid humerus on which genus Paleosula erected for S. stocktoni	VII-24
	Loc. 1875 Orange Co., Calif. Capistrano fm.	no. 6135 shearwater on 2 slabs (poor)	V-24
?	loc. 1018 Lompoc, Calif.	no. 880 P. diatomicus slab	Mez.Exhib.
	Loc. 1945 "Leisure World", ElToro, Calif.	many, unidentified Primaucallus lagunezi	VII-24 Type case
	Loc. 1882 Calvert fm., Nanome Co., Va. Wallmeyer Bluff	large tibiotarsus (distal) unidentified #7007, r. frag. pachymus, colored (sulid)	VII-24
	Loc. 1626 Pyramid Hill, Kern Co. Calif.	Upper end coracoid 8927 unidentified	VII 24
PLIOCENE			
Middle	Locs., 1075, 1080, 1081 and others San Diego fm., San Diego, Calif.	TYPES: P. kanakoffi, 2122 P. kennelli, 2127; Miosula recentior, 2117; Brachyramphus pliocenus, 2119; Colymbus subparvus, 2568; Gavia howardae	type case
		Miscellaneous specimens Mounted Mancalla	VIII-24 Mez.Exhib
Lower	Loc. 1067, Corona del Mar, Calif.	TYPE P. felthami, 2037 Miscellaneous sps.	VIII 24 type VIII-24
?	Lower Loc. , Ricardo, Calif. (Clarendonian) Chassee 208	2 frags. humerus, galliform	IX - 11
?	Lower Loc. , FishLake Valley, Nev. (Clarendonian) Downs 325 (V2804)	Frag. tibiotarsus, passerine?	IX 14 IX-20?
Hemphillia	Loc. 62, Rome, Oregon (Malheur Co.)	Several, some ident. and recorded by L. Miller	X-17
"	Loc. 63, Thousand Creek, Nev. Hemphillia	Ducks, geese, grebe (9), coot	IX-22
"	Loc. 49, Pozo Creek, Kern Co., Calif.	No. 454 TYPE humerus Sarcoramphus kernense Miller TYPE	X-20

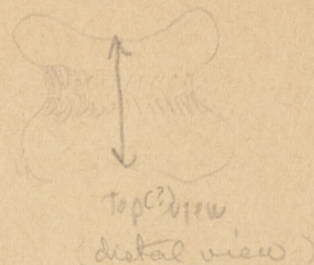
	Locality	Material	Case
PLIOCENE continued			
	Hemphillian Locs. 289 and 276, Rincon, Mexico	Misc. sps.	X-6 Research
		TYPE Phoenicopterus stocki (tibiotarsus) Miller	Type
"	? Loc. 286, Yepomera, Chihuahua	Nos. 4618-4620 duck 4619	X-6 Research
Low. Blancan	Loc. CIT 505 = LACM 1136 Michoacan, Goleta fm., Mexico	nos. 3166, and 4632, small cormorant	Type case Research
Blancan	Loc. 460, Wikieup, Arizona	Nos. 3964-3998 misc.	IX-2X X-16 = X-19
"	? Loc. 110, San Pedro Valley, Ariz.	Misc.	X-16
"	? Loc. 118 Snake River, Idaho	8 bones (2 recorded Miller)	X-20
"	? Loc. 122, Barbour Ranch, east of Brunneau, Idaho	8 bones (4 recorded Miller)	X-20
"	? Loc. , Grand View, Idaho	2 frags.	X-20
"	? Loc. 1842, So. Brunneau, Idaho	no. 5524, grebe, humerus	X-20
"	? Loc. , Shoofly Creek, Brunneau Idaho (from U. Calif.)	no. 4711, tarsus, grebe	X-20
"	Loc. 131 Coso Mts., Inyo Co., Calif.	Eagle phalanx & grebe coracoid (chick)	X-18 12
"	Loc. 1182, Coso Mts., " " Calif.	No. 2808 Cormorant humerus	X-18

MIOCENE

Feb 20, 1964

Bubo virginianus

distal end of tibiotarsus -
outside width of condyles



1. Manix lake specimen 14.15 mm

La Brea specimens

111	111	111	111	111	111	111
12.2	12.6	13.1	13.6	14.1	14.6	15.1
12.5	13.0	13.5	14.0	14.5	15.0	15.5
4	8	1	9	14	15	2

- ✓ 1. 13.0 5
- ✓ 2. 14.5
- ✓ 3. 12.2 E9363 ✓
- ✓ 4. 14.5
- ✓ 5. 13.4 ✓
- ✓ 6. 14.9 5
- ✓ 7. 14.9
- ✓ 8. 12.9 ✓
- ✓ 9. 13.6 ✓
- ✓ 10. 15.5 E9616
- ✓ 11. 14.7
- ✓ 12. 14.5
- ✓ 13. 13.8 ✓
- ✓ 14. 13.8 ✓
- ✓ 15. 14.2 5
- ✓ 16. 14.5
- ✓ 17. 14.4
- ✓ 18. 15.5 F7472
- ✓ 19. 14.5
- ✓ 20. 13.6 ✓
- ✓ 21. 14.5
- ✓ 22. 14.9
- ✓ 23. 12.8 ✓
- ✓ 24. 12.3 ✓
- ✓ 25. 14.7
- ✓ 26. 12.7 ✓
- ✓ 27. 14.4
- ✓ 28. 14.0 ✓
- ✓ 29. 13.7 ✓
- ✓ 30. 15.0 E9779
- ✓ 31. 14.3
- ✓ 32. 12.3 ✓
- ✓ 33. 14.8
- ✓ 34. 14.8 5
- ✓ 35. 13.7 ✓
- ✓ 36. 14.9
- ✓ 37. 14.5
- ✓ 38. 13.7 ✓
- ✓ 39. 14.2 5
- ✓ 40. 14.5
- ✓ 41. 14.7
- ✓ 42. 14.4
- ✓ 43. 14.5

- ✓ 44. 14.8
- ✓ 45. 14.9
- ✓ 46. 12.7 ✓
- ✓ 47. 14.0 ✓
- ✓ 48. 12.6 ✓
- ✓ 49. 12.4 ✓
- ✓ 50. 12.8 ✓
- ✓ 51. 12.8 ✓
- ✓ 52. 12.9 ✓

Mean = 14.1

Max = 15.5 - 2 spec
Min = 12.2 - 1 spec

Husbands Max = 18
Min = 11

She may have taken this measurement differently because her mean is between 16-17. My mean is much smaller, (over)

Conclusion. The specimen from Manix definitely falls within the range of *B. virginianus*, also while examining the specimens from La Brea I noticed all the visible characters on the manix specimen to be present in the Brea specimens. These include depth of muscle attachments, shape of inter condylar area etc. The range in these appears quite great in the brea specimens and it seems reasonable to expect that the manix specimen is *B. virginianus*.

It may be interesting to compare some of these characters with recent specimens also.

B Arvey

Length?

12. *B. virginianus pacificus* ♀ BL 1471 - 33mm

11.9	12.1	12.6	13.1
12.0	12.5	13.0	13.4
11	111	111	1111
2	3	3	4

Brazilian records of *Coragyps atratus*

Lapa da Escrivania Nr. 5

^{Bones}
Knogler af flere Individier, gamle og Unger

Lapa da Lagoa do Sumidouro

Nogle faa Knogler, vist af én Fugl.

Der er fundet: ^{Phalanges} Ledben, ^{coracoid} Ravnenoesben, ^{Humerus} Overarm, ^{ulna} Albueben,
^{carpometacarpus} Mellemhaand, ^{phalanx} anden Fingers første Led, ^{Femur} Laarben,
^{Tibia} ^{tarsometatarsus} Skinneben, ^{middle toe} Løb, ^{first} ^{Phalanx} Mellamtaaens første Led.

Catharista atratus og *Cathartes aura* kunne temmelig
let skjelnes efter de fleste Knogler.

Nuevo Leon on line with
south tip of Texas

Oaxaca is about 560 mi
further south (^{somewhat} ~~slightly~~ east 100 mi?)
#1360 small

Zacapa, Guatemala
another 125 miles south and
~~south~~ east 560 miles east of
[of Oaxaca] #716 large (♂
but within
J. H. Allen said E.
be the small subsp.
brasiliensis

unif. meas
Cat. at 414--445 sexes aver same
♂ max is larger

C. " Bras

386-413 ♂ aver large (1 mm.) but ♀ has
greater max

C. " foetens

412-437 ♂ aver. large (2 mm.)
but min. is smaller

C at at. No. Amer.

Caagys atratus brasiliensis Mex-S. Amer.
" " foetens S. Amer.

Notes in manila folders in bottom drawer of metal file cabinet:

Rancho La Brea

Cranes, Pigeons, Struthio, mycteria, crows

Turkeys

Caracaras

Eagles

Vultures

Storks

New records & Acad. jct

Indian & it censuses

C14 dating

Pt 10

Other Pleistocene

Manix Lake

Newport (Plio also)

Deer Reef

Salvador Cave

Trail Lake, Oregon (2)

Conkling & Shelter Caves, N.M.

~~Payson Canyon Cave, N.M.~~

Little Hatchet Mt. Cave, N.M.

La Brea - And piscus

Nevada Condor

Pyramid Lake egg

Anaethemula

Vallecito

over

Tertiary

Mishuicay

Balaevensis } mid. Calif.

Telmahates (Eor. So. Amer.)

Cocene of San Diego

Miscell.

St. Mary's midden

Recent faunas

Papers given at meetings

Unpublished MSS

Encyclopedia

Sci. Service notes

Queen James (2)

Loz. 1071 (32)

San Diego (see H 1949 camp 584

13 *maucalla maddenii* p. 150

90 - 11

Loz. 1071 - 32 bones

1072 + 1073 22 bones (Amniclus)

1074 - 1

1075 + 1077 24

1076 2

1078 2

Baldwin 1079 21 8

Washburn 1080 83

168 includes L. Mollis

Colaptes parvus 12

Gebe sp. 2

Zania concinna 1 (+4?)

Zania bonasus 1

P. kanabensis 9

Phel. kennelli 3

Mosula recentior 2

Brachyramphus
flavescens 1

Maucalla see ab 90-13 (90)

Shorebird 1

139

1067
Crown del Mar

4 *Maucalla*

10 ⁰ bones ~~11~~

14

P. felthamii 4

Maucalla 4

unidentified 6

14

Playa del Rey 1949 H

Chondybe 3 out } LAM
1 fem 959
1 fib 999
2013

San Pedro H 1949

P. gusius 1 CIT

B. can.? 1 LAM 683 rad.

Chondybe last 1 fem LAM 2014

1 ped. phal CIT

1 tibia 2010

Julia am. 1 cap LAM 684

6

Newport Bay

loc. 1006

1958

1955

<i>Gavia stellata</i>	1
<i>Gavia minor</i>	11 (from ^{loc. 1006} 240 + 136)
<i>Aech. occid.?</i>	1
<i>Diomedea albatrus</i>	1
<i>Puffinus griseus</i>	11
<i>Phal. penic.</i>	1
<i>Anser albifrons?</i>	11
<i>Chendytes lawi</i>	1111 (one is from loc 136)
<i>Catoptrophorus inornatus</i>	1
<i>Mareca calis.</i>	1 (2ndaries deposited)
	<u>24</u>

####

1949

16 sps,

48 bones

<i>Gavia archica?</i>	1
<i>G. minor</i>	2
<i>Aech. oc.</i>	1
<i>Diomedea alba.</i>	3
<i>P. griseus</i>	4
<i>P. griseus?</i>	1
<i>Larus glaucus</i>	3
<i>Phal. penic</i>	1
<i>Motis reganus</i>	3
<i>Branta can?</i>	1
<i>Anser albifrons?</i>	1
<i>Ag. thya valisium?</i>	1
<i>Melanitta deglandi?</i>	1
<i>Chendytes lawi</i>	16
<i>Therornis sp</i>	1
<i>Larus sp</i>	1

41 identified

Humerus

length br
fur dist br
sh depth
head

Q ₁	181.5	33.3	26.4	12.7	13.8
CIT 4713	181 ^{est}	—	26.4	12.3	—
CIT 4725	—	—	26.3	—	—

B. can.
moffitti
shorter

Humerus

length br
fur dist br
sh depth
head

CIT 4714	130.0	25.5 [?]	19.4	8.9	18.3
CIT 4724	—	26.0	—	—	10.4
CIT 4728	—	—	20.3	—	—
PZ ^{unmarked?}	—	—	—	—	10.0

B. c.
Det. moffitti
T. stahlii
T. stahlii

R ¹	170 ^{est}	30.3	23	12.2	11.6
R ²	161 ^{est}	30.4	23	12.1	—
R ³	—	31.2	—	—	—
P3	—	—	23.5	—	—
S3	—	—	23.0	—	—
O ²	—	—	23.3	—	—
S2	—	29.9	—	11.9	11.7
L2	—	29.2	—	—	11.8
Q ¹	—	28.7 [?]	—	—	11.8
J	—	—	—	—	12.0
O ²	—	—	—	—	11.9

B. can.
Det.
moffitti
T. stahlii

P1 sh	—	—	—	—	10.7
L2	—	—	21.8	—	10.6
^{1 bone?} J	—	—	22.3	—	—
I	—	28.2	—	—	10.9
J	—	—	—	—	11.2

B. can. subsp.?

Q ¹	116+	21.4	—	8.0	7.9	B. nigricans
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N ¹	—	28.0	—	—	10.2	Causee albi?
----------------	---	------	---	---	------	--------------

Californiacarpus

Caracis

	ext length	least gr int Depth MI	least gr int MI	Br shaft	HT distal synth.	Length between synth. yaws				pr length just back of int. pt.	lower edge scape facet to same place	upper edge scape facet to head	br sh	depth in	br furcula facet	br below furcula facet	gr depth head	HT furcula facet
L ²	104.1	(24.3) 27.0 27.0	13.9 15.1	9.2	11.7	61.4	CIT 4715			67.1	44.4	24.1	9.1	8.6	15.4	14.0	8.2	7.8
							Q ¹			—	43.5	—	9.5+	9.1	—	—	—	—
P ¹	—	(19.5) 21.2 21.2	11.4 12.3	6.6	—	47.7	J (Right)			61.0	40.1	21.0	9.1	8.6	12.9	12.4	8.0	7.9
							J+D ² (left)			62.9	41.1	22.0	9.7	9.6	13.5	13.0	7.6	8.6
							Q ¹ left			59.75	39.7	20.7	8.7	7.9	12.1	12.0	7.1	7.3
CIT 4722 4719	75.2	18.2 18.6 18.9	— 11.2	6.4	11.1	41.1	CIT 4716 (left)			60.4	40.0	20.9	8.1	7.7	12.4	12.2	7.0	7.3
P ²	—	—	—	6.37	—	—	P ²			—	—	—	8.5	7.4	—	12.9	—	—
P ¹	—	—	—	6.2+	11.2	—												
							O ¹			45.3	30.5	15.4	6.7	5.6	10.6	9.4	5.3	6.6
L ²	—	—	—	5.9	8.5	—												
							N ¹			—	—	—	—	—	10.9	10.8	6.7	7.4

Uluu

Scapula

1950. A Miocene flamingo from Calif.

Condor: 52, 69-73.

material - distal end tibiotalus, distal end ulna - 2303-2303A in UCLA coll.

tib. - characteristic["] is a definite, raised ridge for the attachment of the external end of [the ligamentous bridge overlying the bony bridge].

Also: a median ridge divides the posterior intercondylar sulcus into two parallel furrows [not in Phoenicopterus]

max. trans. diam. - 17.0

max. sag. diam. - 18.8

Referred by H. Miller D

Megafalacrodon connectens Z
A. Miller

16 tails ✓

humus D2626-P3

carfur E1938-P60

feur C1362-P16

Tilia C3445-P16

C5893-P4

coracoid?, #4412-P16

✓ D4698^{P61} ✓ C9759^{P4} ✓ E3082^{P3}
✓ D4855^{P61} ✓ C8455^{P4} ✓ E1935-P60

(J9855^{undata})
B9989-P16

D3126^{P3} ✓ C2860^{P16} ✓ E3181-P3
✓ D6451^{P67} ✓ C6655^{P4} ✓ E1089-P16
✓ D153^{P4} ✓ C7149^{P4} ✓ E1089-P16
✓ C422-14
✓ C9917-4

V = labelled "lender" in catalog

20	11.6	57.9
19	11.25	59.2
19.3	12.0	62.3
20.2	11.5	57
21.6	13.0	60.3
21.5	12.7	59.1

Check for Anabrinus

- Drawer 40E - Ephemera 3 anseiform bones (could be ^{wasonaha} Aues)
- 40K - Ruin near conf. humerus - no ident. include
- " 30H - San Pedro Valley - dist. ~~bone~~ " (med. size)
- " 25Q - Wickieup collection
- " 22J - Dry Creek Pile Aug. collection loc. 62 unident.
- " 45L Corvado #4439 "large creek" Teguigine loc 310

Distinction bet. humeri B. cau. & B. nig

B. cau. muscle line ext to sharp ridge longer, more parallel to ridge & thus farther back from ridge for the full length.

B. nig., ridge ^{either quite short or} oblique placed thus pretty close to ridge than distally.

References to cormorants from Hagerman beds

P. idahensis

Marsh, 1870. Amer. Jour Sci. ser. 2, vol. 49 (type proximal half left carpometacarpus), p. 216.

Shufeldt, R.W. 1915 Fossil birds in the Marsh collection. Trans. Connecticut Acad. Arts Sci., vol. 19, p. 68, pl. 6, fig. 44
Type carpometacarpus restudied (depth prox. 13.75 ext., 14.2 int. ht. of proc. M 1 at attach. 10.8, to tip 11.55. (illus.))

Wetmore, A. 1933. Pliocene bird remains, Smithsonian Misc. Coll., 87:5-6, ~~figs 3-4~~ ~~no illustration~~. Said to be distinctly larger than any living cormorants though not as heavy as in *P. perspicillatus* (type carpus also said to be less heavy, more slender than *P. perspicillatus*. Ulna like other cormorants except carpal ridge somewhat longer

P. auritus

Wetmore, A. 1933. Pliocene bird remains. Smith. Misc. Coll. 87:6-8. figs. 3-4 tarsometatarsus (length approx. 65.8 mm.)

Also mentions two upper ends of coracoids from "a cormorant slightly smaller and slenderer than the average for *P. auritus*."....."These appear to represent a third species of cormorant from this Pliocene locality.

P. macer

Brodkoro, P. 1958. Fossil birds from Idaho. Wilson Bull. 70:237-242 see pp. 237-238, and fig. 1, left. Type carpometacarpus Cuneiform fossa deep but much shorter than in *P. auritus* and *P. wetmorei* (Bone Valley Pliocene), extending prox. only to level of external ligamental attachment; distal fornx shorter. Length 67.5 mm., width of metacarpal II, 4.5 mm., width through trochlea, 5.6; width distal end, 5.7, distal fornx 6.0.

Refers coracoids of Wetmore to this species.

Contib 107 H on Se Paleofa

P. wetmorei

Brodkoro 1955. The avifauna of the Bone Valley formation. Fla. Geol. Surv. Rept. No. 14 pp 1-57 (*wetmorei* pp 12-17) many elements

$$18.6 \div 20.7 = 2 \times 1.52 \times 5$$

$$20.7x = 19.3$$

$$19.3$$

$$18.2$$

$$20.7 : 24.4 = x : 18.6$$

$$24.4x = 385.02$$

$$x = 16.0$$

$$\begin{array}{r} 24.6 \overline{) 2070} \\ 1968 \\ \hline 1020 \\ 984 \\ \hline 360 \end{array}$$

$$\begin{array}{r} 25.5 \overline{) 2150} \\ 2040 \\ \hline 1100 \\ 1020 \\ \hline 800 \end{array}$$

$$\begin{array}{r} 19.3 \overline{) 18.20} \\ 1737 \\ \hline 830 \end{array}$$

$$\begin{array}{r} 24.4 \overline{) 2150} \\ 1968 \\ \hline 1820 \end{array}$$

$$\begin{array}{r} 24.2 \overline{) 19.70} \\ 1936 \\ \hline 34 \end{array}$$

$$\begin{array}{r} 18.4 \\ 80 \\ \hline 14840 \end{array}$$

$$\begin{array}{r} 21.5 \\ 207 \\ \hline 1505 \\ 430 \\ \hline 186 \overline{) 44505} (2 \\ 372 \\ \hline 730 \end{array}$$

$$\begin{array}{r} 21.5 \\ 186 \\ \hline 1290 \\ 1720 \\ \hline 215 \overline{) 39990} (193 \end{array}$$

$$\begin{array}{r} 207 \\ 1929 \\ \hline 1863 \\ \hline 660 \end{array}$$

$$\begin{array}{r} 207 \\ 186 \\ \hline 1242 \\ 1656 \\ \hline 207 \overline{) 38502} (186 \end{array}$$

$$\begin{array}{r} 182 \overline{) 843} \\ 1820 \\ \hline 843 \\ \hline 77 \end{array}$$

$$\begin{array}{r} 215 \overline{) 2070} \\ 1935 \\ \hline 350 \end{array}$$

$$\begin{array}{r} 255 \overline{) 2460} \\ 2295 \\ \hline 1650 \\ 85 \end{array}$$

$$\begin{array}{r} 186 \\ 91 \\ \hline 186 \end{array}$$

$$\begin{array}{r} 186 \overline{) 1820} \\ 1674 \\ \hline 1460 \end{array}$$

May 11, 1966

Received from
Ed Mercurio
Address —

14 Bird bones from

" Mercurio- Adamson locality
in Chino Canyon, Simi Valley "
Collected December 4, 1961

[Note: one bone bears numbers 13-2-2]

Included are

Albatross (large)

Prox. and dist. ends of humerus

Prox. end of ulna

Dist. end of tibiotarsus

shaft fragment of tarsometatarsus

Tip of upper mandible

Shearwater (small)

Prox. half of ulna

7 unidentified fragments

Preparation is needed on 4 of the bones to remove
hard matrix that hides detail of contour

Hildegunde Hammer

Lumina *desperoria* from S. Bah 1 mi so. of Buffalo Gap.
length br. dist back dist
br sh sh

52.4 27.0

Patella

br. artii

44.0 21.8 11.0 8.7

32.6

— 438 19.6 16.3

July 1964 Macdonald

Recent form recorded as lost in S. Am by Ameghino
Parker - This 188.9 pp 183-185

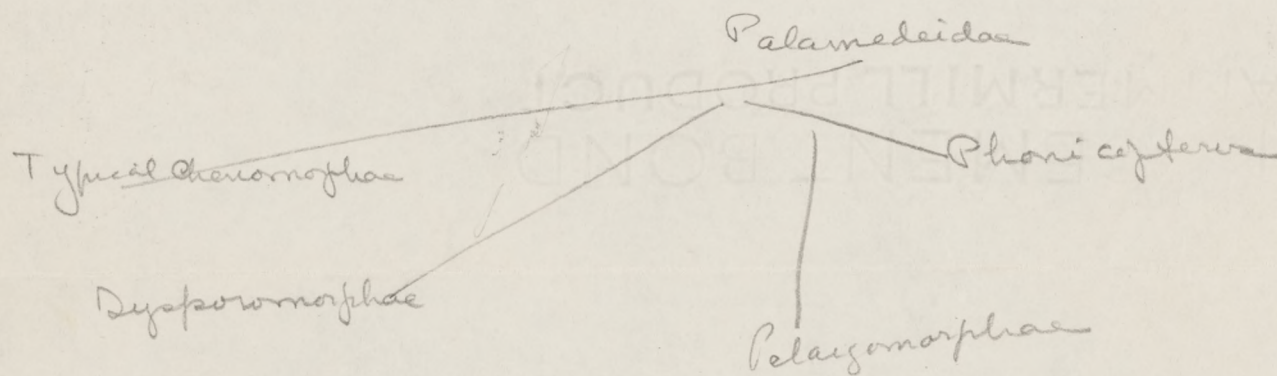
Except penguins - all carinate have either temporary or permanently an
unequal phalanx on both index & pullex (D₁ & D₂)

manus of *Phaenicopterus ignipalliat* (= *P. chilensis*); humerus 195 mm, ulna 207 mm,
manus 163 mm. (manus $\frac{3}{4}$ + $\frac{1}{4}$ of the ulna + $\frac{5}{6}$ of the humerus)

Phoenice wing is very perfectly formed - - - and is more like that of an
bird than that of a goose, as, indeed, is much of the structure of Ph. "
Parker believes Huxley has "overstated the avian characters of
This bird; its semi-plumbeous are abated, as in thises."

Weldon - PZS 1883 p. 641

While skull & larynx of Ph. & webbed feet & shape of bill connect it.
Saccelli notes, other organs (air cells, muscles, alimentary canal, vertebrae
& wing bones) show rel. to storks.



Living flamingoes

Phoenicopterus

P. antiquorum -- Caspian Sea, West Siberia, NW India, So. Africa. ^{length 44-53}
Formerly southern Spain, So. France, Tunis and Egypt ^{tarsus 13}

P. ruber -- Atlantic coast of subtropical and tropical America. ^{length 42-48}
^{tarsus 12-14.5}

P. chilensis -- Temperate South America from Peru on west and Uruguay on east to Tierra del Fuego. ^{like antiquorum but smaller}
^{length 42, tarsus 9.5, culmen 5}

PHOENICONAIAS (Type *Phoenicopterus minor* Geoffroy) ^{length 36, tarsus 8.75-7.5}
^{culmen 4}

P. minor -- southern and eastern Africa; Madagascar and NW India.

PHOENICOPARRUS ANDINUS (Type *Phoenicopterus andinus* Philippi)

P. andinus -- Chilean Andes and Andes of NW Argentina. ^{length 48 in}
^{tarsus 10.8}
^{culmen 4.6}
James? ^{length 36, tarsus 7.25}

Phoenicopterus
up. mandible overlaps, lower lamellae on
edges of upper mandible almost perpendicular; throat naked

Phoeniconaias

A. upper mandible included between the rami of the lower one;
lamellae on edges of upper mandible more or less horizontal;
throat feathered,

① Hind toe present; lamellae on edges of upper
mandible smaller.

Phoenicoparrus - Same as A above but

② Hind toe absent; lamellae on edges of upper
mandible very prominent & quite horizontal.

All Phoenicopteridae

Tarsus 3 times length of femur

^{Huxleyi}
^{PZS 1867, 461} Bill abruptly bent in middle & more or less pointed,
tongue large & thick. Plumage rose color. Yg have
straight bill!

See Sharpe, 1889 pp 224-225 on "Anserine affinities of the flamingoes,"

See P. Z. S. 1832 pp 141-144 Owen "Anat. flamingoes"

See Jans. J. Ornith 1877 - gadus, Anat. P. roseus & classif. pp 382-394 pl 6 fig 1

" P. Z. S. 1883 pp 638-652, pl 1X, 1X, Weldon Ph. & all's anat.

" 1889-1893-1895 - Parker Mammals & Ph.

/Notes regarding large anserine fossil bones -- from Malheur, Oregon
CIT loc. 62 -- assigned by Loye Miller to *Branta dickeyi*

TARSOMETATARSUS

Differs from *Branta*, *Chen*, and *Anser* posteriorly in marked slope of shaft externally beneath hypotarsus from raised area at base of ridge #1.

Like *Branta*, *Chen*, *Anser* and American swans in clear demarcation of hypotarsus from cotylae externally by reason of more distal position of hypotarsus with respect to cotylae (*Sthenelides*: top of hypotarsus on same level proximally as cotyla)/

Less inflated internal side of shaft below cotyla than in American swans; similar to *Branta*.

STERNUM (MANUBRIAL FRAGMENT)

Gooselike in close joining of right and left coracoidal sulci in center, but differing from *Chen*, *Anser* or *Branta* in absence of process in center between dorsal lips of sulcus.

Swans (even *Sthenelides*) have space between right and left sulci ventrally and medially and ventral lips do not face directly upward (as they do in the fossil) but bend over to expose the articular surface anteriorly.

The above two characters suggest "perhaps most like *melancoriphus*"

There is a larger fossil specimen of sternum that Miller assigned to swan. This specimen is similar to the above fossil though the sulci seem a little more separated. There is no indication of the deep dorsal undercut above the sulci such as in true *Cygnus*.

These sternal parts clearly indicate a bird the size of a swan, but unlike those living. They are not goose, at least not *Branta*, *Anser* or *Chen* because of absence of projection on dorsal lip.

CORACOID

Swanlike in heaviness, especially notable through body of bone between head and line of scapular facet, and in broadly, thickly rounded medial contour below head (in this area) ventrally. This area is quite thin in geese and edge of contour is more angular.

Sternal end fairly straight as in geese and *Sthenelides*. American swans flare out markedly from shaft to sternal facet.

Undercut below furcular facet marked and numerous pneumatic perforations are present as in certain geese; lacking large perforation toward dorsal side, however, which characterize *Branta*. In these characters closer to *Cygnus* than *Sthenelides*. Ventral sternal facets in *Branta* project more abruptly from distal end and are short.

Scapular facet very deep and oval, like *Sthenelides* (with long axis vertical, not tipped).

Dorsal part of furcular facet less protruding than in *Cygnus* (like *Sthenelides* and geese).

Characters of coracoid to be used for diagnosis of new genus:

Furcular facet and shaft below, undercut as in *Cygnus columbianus* but more pneumatic foramina present.

A new genus should be established for these bones -- and for *dickeyi* if these bones represent *dickeyi* (type from McKittrick). The coracoid is definitely not *Branta*.

More details regarding Malheur Oregon coracoid assigned to *Branta dickeyi* by Miller. CIT loc. 62, specimen nol 3236.

Not *Branta*:

Lacks typical large pneumatic foramen beneath head on dorsal half of shaft. Instead shaft is slightly convex in this area.

Bone has small foramina beneath furcular facet and facet overhangs for its full extent -- somewhat as in *Cygnus columbianus*; also facet with undercut appears to protrude slightly ventrally beyond shaft as in *C. columbianus*.

Differs from *C. columbianus*, however, in (1) deeper more evenly oval scapular facet (greatest axis vertical, not at bias angle); (2) stockier, less angular contours, particularly contours proceeding back from furcular facet along ventral edge; (3) sternal end less convex, facets less projecting.

Measurements

Length from internal tip; distance from edge of scap. facet to tip of head

Fossil	85.2	37.0
C. col 1746	83.4	40.0
C. col 1475	78.0	35.7
S. olor 1096	85.8	39.0
B. cana.	65.5	28.3

Breadth from dorsal to ventral edge between head and scapular facet much narrower than in either swan. However overall length is similar.

Br. fossil	18.2
" C.col 1746	18.2
" C.col 1475	16.7
" S. olor 1096	20.7

S. paloregonus said to have furcular facet flattened against shaft "anteriorly" (= ventrally) with only slight undercut below brachial tuberosity as in *S. olor*. This fossil (3236) from Oregon is undercut for full extent, as in *Cygnus*. Shaft beneath brachial tuberosity not depressed in 3236 but said to be "only slightly so" in *paloregonus* ("as in *S. olor* rather than *melanocoryphus*). Neck concave in *paloregonus* as in *melanocoryphus*; 3236 not so (more like *S. olor*).

In *Branta* the scapular facet is less deep, and longest axis is nearly horizontal. Ventral sternal facet projects abruptly and is very short. In *Sthenelides* the ventral sternal facet projects about as much as in *C. columbianus* but is depressed, whereas *Cyg.* is straight. Dorsal facet in *Sth.* very inconspicuous, not projecting at all -- just a "surface" extending back from sternal end. Projection in goose is only slightly more than this and fossil most like goose (between *Cyg.* and *Sth.* but ventral facet less projecting.

CIT specimens from loc. 62 Malheur, Oregon assigned by L. Miller to *B. dickeyi*: Coracoid 3236 (and a proximal frag. unnumbered to me "unident")

Distal end tibiotarsus 3232

Proximal end tarsometatarsus 3233

Manubrial end sternum 3235 (and costal side unnumbered)

Proximal end carpometacarpus 3234

Vertebra and toe bone (unnumbered, except loc. no.)

Assigned by Miller as "goose smaller than *dickeyi*"

Proximal end carpometacarpus loc. 62 (unnumbered specimen)

Distal coracoid " " "

Distal end carpometacarpus " " "

Ball head of femur " " "

Distal 2 trochleae of tarsometatarsus " " "

From loc. 122, Idaho: "Goose smaller than *dickeyi* dist. humerus (unnum), 2 scapulae and manubrium of sternum unnumbered assigned to swan

Zuma Beach

30

Puff. griseus

comp. carpalula.

my. femur

prox end humerus?

prox end humerus

comp. humerus broken in $\frac{1}{2}$

sp.? (parvulus?)

large mandible

pedal phalange

scapula

clendytes

near comp. tarsus

thoracic vert?

dist end frag. femur?

Puffinus, sp. (or Lulularius)

dist. frag. sh. humerus

~~dist. 1/2 tarsus~~

frag. coracoid

thoracic

Zula - mid frag. coracoid

Loon

distal end fibiotarsus

Coot

dist end fibiotarsus

coracoid?

sp.?

2 art. ends mandible

1 dist 1/4 tiny humerus

~~1 prox frag. coracoid dist. dist?~~

2 prox end radii (1 labelled manus)

2 auto

2 pedal, 2 wing phalange

37 Small bird

assoc'd carpus, rad. ulna,
coracoid + dist $\frac{3}{4}$ humerus

3 Duck
at least prox $\frac{1}{2}$ humerus (dinner)
dist $\frac{3}{4}$ ulna (dinner) ?

2 prox epistylus
1 complete coracoid
2 frags of radius
2 frags coracoid (1 indiv.)
1 up end coracoid (dinner)
broken but both ends humerus
lower end coracoid?
cervus?
dist end carpus

Common rail

dist end humerus
up. end coracoid
sp.

prox end tibia (size of Cat's paw)
dist frag carpus
frags femur + tarsus (drift)
dist end radius
scapula
frag tarsus (loose?)
frag tibia, sternal

Quail?

1 Dist end humerus?
prox end ulna?

Salmon (assoc'd dist half humerus
prox half ulna + rad?)

Quail
coracoid

California avian fossil localities - new records
Pleistocene - M. H. Hammer and Richard Reynolds

Zuma Beach 67 bones 14-15' sps.

Mike
Richard
Sauls
on file
1967

Marine deposit - includes Chendytes, shearwater, fulmar,
cormorant, loon, small alcid, ducks, booby, coast
gull (quail), cormorant & other pinnipeds?

Pleistocene - Chas. Rogaine

Unrecorded Middle Anacapa Id. - nearly complete skull Chendytes
as of 10.23.68

Pleistocene - Phil C. Orr, Sta. Barbara Museum
Santa Rosa Id. 119 bones 25 sps.

HI
REPORT
PUBLISHED
IN, ORR
Sta. Bar Id
1968

Marine deposit - interesting comparison with
West Anacapa of presumably same late Pleistocene
age greater abundance of flying geese and
few Chendytes (flightless ducks, geese) 70:4
At Anacapa none of the former, over 140 of Chendytes

HI some in Lipp 1966

HI some (on Chendytes) earlier in Cordon.

Middle Pleistocene

Vallerito Creek Laguna, Anza-Borrego Desert

Since HI paper of 1963,

32 + 4 =

6.7
1
1.9
32
219 Plants

157 Mo.
2200
2198
378
374
472

California avian fossil localities - new records

P. 3

Oocene

WRITTEN

PUBLISHED
1966 (1967?)

Sharktooth Hill - Ed Mitchell, Mike Hammer & others

17 Bones 6 or more species

Adds information on ^{sp.} previously described

Presbytherus abatus - large goose described from Tibetans

Now add prox. end tarsometatarsus and possibly femur

Morus vagabundus - described from distal end humerus

Now add complete humerus (prox end) ~~sp. abatus~~
and 2 prox. tarsometatarsus
and possibly 2 prox. end ulnae

Puffinus pacificus - small shearwater (humerus)
2 fragments of humerus (sh, r, dist. frag.)

Diomedea californica - type tarsometatarsus
Add ~~fragments~~ ^{distal} humerus

Also adds what appears to be a new species
of ^{large} sulid, a new albatross (small ulna)
(possibly = Wetmore's record of Morus sp. (ulna)
2 prox end tarsus here

Miocene

WRITTEN
PUBLISHED
1968

El Toro (Leisure World) museum personnel & students
135+ (Bones) 9 or more sps.

Maucaallid is
less flattened wing
than Plio maucaalla
Osteodontornis
seems smaller, unless
this is very tip of mandible
& teeth are smaller
close together here,

Most noteworthy are 5 bones of Maucaallidae, heretofore
known only from Pliocene and 1 fragment of
lower mandible related to Osteodontornis known
only from the Miocene.

Shearwater bones are most abundant (43)
Previously described shearwaters (= Plio, 4 M.O. of Calif.)

El Toro bones (humeri) are not either of the Plio sps.
Possibly P. pacificus Mis. of Sharktooth Hill

Includes small alcid, one of which has shortened
broadened ulna as in those having flight & using wings brown

Includes ~~two~~ sulids - probably not M. vagabundus Mo.

Miocene -

Miscellaneous -
Shearwaters from Ventura, Orange, Sta B, TLA Antio
Sulid from L.A. Co.

Over

Eocene - First for California

San Diego 2 localities 1 bone each (Poway)

PUBLISHED

1 may be quite form related to

1 being described as new sp. of owl put in
Eocene genus Protorus.

Reprints to Paled Library 3,25,66

4 Young - Chung - Chein

1 Peter Vaughn

1 ~~Bobb Schaffer~~

1 CM Sternberg

2 Richard Fox

7 " Estes

2 Donald Baird

4 AS Bruck

4 Barnum Brown

2 Theodore Eaton

1 Char. Gilmore

1 OP May

1 DA Hooyer

1 Glenn Sefsen

1 JW Kitching

1 R. S. Lull

2 Ernest Lundelius Jr

2 Thomas M. Delbrick

1/2 Everett Olson

1 Louis S. Russell

1 John I. Stephens

1 Margaret Skell Stevens

1 Ernest W. Williams

1 Bardach (fish) } 6.15.66

1 Kurben

stamped
with my
name so

they can be
retrieved if
necessary

III

1 Pierce & Welles

1 Dorr & Mose

1 Seffler

aprio Sta Margarita (Puerto
Yorker member)
Mid Altamira Hole - Valmonte
Monterey
Low Saucian

Monterey now divided
up part = Valmonte
Mid + up = Altamira

26.4

$$\begin{array}{r} 22.5 \\ 1.3 \\ \hline 675 \\ 225 \\ \hline 29.25 \end{array}$$

g. Puffinus

sg. Adenna

leucomelas
carneipes (inc. cretopus)

sg. Thyellodroma
pacificus
bulleri

sg. Puffinus

tenuirostris
heinrothi
nativitatis
puffinus (inc. opisthomelas)
reinholdi
auricularis
newelli
assimilis
therminieri
griseus
persicus

g. Calonectrus
diomedea
gravis

Los Angeles County Museum

MAMMAL COLLECTIONS

A. _____

Acc'n No.

June 16, 1966

Received from Hildegarde Howard

Type specimen of Miortyx tères Miller
(Proximal end of humerus no. 34453)

for return to Museum of Paleontology
University of Calif., Berkeley

Dennis Bramble

H.K. → Greetings from the Davis Emeriti
by Tracy J. Storen
who was here
and Padre Loye Miller
who wasn't

Wed. 15 June 1966 9⁴⁵ p.m.

Puffinus sp.
probably diatomacea
capistrano fm

Michael Archer
Pine Plains, N.Y.
% Jules Archer

approximately $\frac{1}{2}$ mile - $\frac{1}{4}$ mile
south of north end
of Cliff

on stump pile
associated with deep
water fishes

8.7.63

Mike Archer

carpus 38.8 mm.

large wing phal. 118.9

2nd " " " Dig. 2) 20.2 to tip

length shank 86.6 to claw.

" " 75.7 to end of
lower mandible

pos. length ulna? ~~74.1~~

ht beak 8.1

length beak 41.9

from. premax

ht mt 1 proc. to hind crest 7.0

ht mt 1 proc. 4.6

Box 5

2 left, right femora, 1 rt, tibiae
1 dist, ray, left, humerus, r
Chondryx (Cervi) (extinct)
1 dist end rt humerus Phalaropus
1 left coracoid Uria aalge (Rec
sp.)
~~1 dist ray, tars~~

Lot 1

1 right humerus Uria aalge

1 left adult } coracoid
1 rt immature } Phalaropus

1 rt distal $\frac{1}{2}$ femur "

1 left prox $\frac{1}{2}$ yg ulna "

1 rt — " scap. "

1 yg rt femur sp?

#

Lot 2

4 wing bones Pterodroma

(1 indiv?)

ulna, radius
carpo.

aluticus

Cassia alut

San Pedro 186

catalog Puffins (Pleists)

catalog Barton

1295 Harter Lee way

3457 Turkey like

(Some small unnumbered bones
(Catalog))

Santa Rosa Id,

Lanacana Cove
to be recorded

Loc # for Ventco.

Puffins #2708

Delgado Drive = 222/26)

2705
2704
(Solid)

make
labels

342
3225 York Valley, Pleist. La.
Highland Dist.

Corcoran
Parrishia calif.

Charaleis Pit Lomida

11.16.54

Catalog includes Corcoran of
Chendytes

2 lots

Imyo Co. Blauca
Phalacrocorax lunus

Wymann - Tige Linder yd
Dark & Chendytes?

Gypsin Cap
Catalog

Boston localities

V471 - so. limb of syncline subexp
 within bed of pure white tuff 15'
 in thickness & of local extent
 (equal Henricyon stratum &
 fresh part is) SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 14
 T11N, R2W, MDB+M. Seale
 Lake Quabake AS 95.

✓ Mallard (?) - sized duck ^{thin (dist.)}

V492 - (= Ucla 2303 + 2346) Lake Bed
 Horizon, "Tuffaceous clay"
 varying bet. 10-3' in thickness ---
 approx $\frac{1}{2}$ mi West of V471, & approx
 300 ft lower, SE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 15,
 T11N R2W.

✓ Duck (size of Mareca americana, ♀) ^{left,} coarctoid
 m. comp.

✓ Duck (size of muddly) coarctoid head R.

V493 - Thin fossiliferous bed of brown
 tuff & fine ss approx $\frac{1}{8}$ mi E of V492
 & about 20' below.

✓ Mallard? fewer (dist.)

✓ Teal? head coarctoid R.

V498 Beds of fine orange brown tuff
 exposed in upper part of first laydown
 from so. dip, open to the west,
 $\frac{3}{4}$ SE V493 & about 100' above.

✓ Hawk (Buteo?) ungnath
 2 Duck bones. numerous (dist) coarctoid
 head

Say Diego unrecorded

Large Sulid,

coracoid

dist. tubus

sh. humer

Problems

grebe

truncella

Miocene Eucn

Sulid (large)

Puffins

Cape Horn fur

~~St. Lawrence~~

Ventura

Ad. Holly

158
3
4
47.

27.8
3
4
83.4

$$\begin{array}{r} 14.9 \\ 2 \overline{) 29.8} \\ \underline{29.8} \\ 59.6 \end{array}$$

$$\begin{array}{r} 12 \\ 5 \overline{) 60} \\ \underline{60} \\ 22.5 \end{array}$$

$$\begin{array}{r} 39.5 \\ 2 \\ \hline 790 \end{array}$$

$$\begin{array}{r} 14.9 \\ 5 \\ \hline 74.5 \end{array}$$

$$\begin{array}{r} 16.3 \\ 3 \\ \hline 48.9 \end{array}$$

$$\begin{array}{r} 28 \\ 3 \\ \hline 84 \end{array}$$

$$\begin{array}{r} 29.5 \\ 3 \\ \hline 58.5 \end{array}$$

$$\begin{array}{r} 35.6 \\ 15.5 \\ 2 \overline{) 31.1} \end{array}$$

$$\begin{array}{r} 15.5 \\ 5 \\ \hline 77.5 \end{array}$$

$$\begin{array}{r} 31.1 \\ 31.1 \\ \hline 62.2 \end{array}$$

$$\begin{array}{r} 157.1 \\ \text{sum } 19 \\ 28.2 \end{array} \rightarrow 43.9$$

$$\text{sum } 58.9$$

Matthew

Marsland FH.

Rosebud

Harrison

Monroe Creek

Sharp's fm.
x

Rocky Ford ash

Upper
Rb

Lower
Rb

Early 1410

U R Group

U
M Brule

LC Chadron

up Blaucau

Low Blaucau

Hemphillian

Clarendonian - Ricardo

Bartonian

Hemifordian

Orikareean

Whitneyan

Orellan

Chadronian

up. Ruile

Mid "

low. White River

} White River

Uintan

Bridger

Wasatch

Poway & Tapo Ranch

Orange Co., Capistrano fm., Calif.

I 24

Case V-24

Ed saw Merin 1967 Dec,
Douglas Ralph Emberg
P.O. Box 113

Gleneden Beach
Oregon

Private Museum

5 in long skull & beak
of bird (Larus?) well
preserved (about 3 in preserved)
cranium to mid of beak

Cestaria Inc. (aquarium)

Shank to the Heel)

also a ^{from same place} bird humerus

2 in. broad shaft & distal
end

[another bird? skull broken]

in addition to the very large accumulation of avian fossils
recovered (Miller, 1943) from ^{San Josecito Cave, Nuevo Leon, Mexico,}

The collections of the Los Angeles County Museum include fossil
bird bones from ^{fifteen other} sixteen field localities in Mexico, found in ~~six~~ ^{five}
geographical areas. Arranged in order of probable age, the localities
and their contained faunas are ^{listed below} as follows:

San Josecito Cave, Nuevo Leon

Late Pleistocene

Loc. 192 -- ^{Dunal 1000} bones,
(Miller)

species recorded 19

Tequixquiatic, Mexico

Locs. 308, 309, 310, 311

Late Pleistocene (Wisconsin

"Upper Becerra" ^{Sangamon}

~~Ciconia (Extinct)~~

Breagyps clarki

Aquila chrysaetos?

Caracara prelutosus

~~Phalacrocorax~~

Anas, sps. (2 or 3 species)

Aythya sp.

Passeriformes sp. (1 or 2 species)

Unidentified bones (two)

Loc. 268

"Lower Becerra" (Illinoian)

Cygnus, sp.

Ciconia (?) sp.

Eagle, sp.

^{Lower or middle Pleist.}

Lago de Chapala, Jalisco

Early Pleistocene? (Blancan?)

"Chapala formation"

Locs. 1129, 1176, 1283 ^(at least?)

^{Nebraskan @ Clements}

Podiceps, sp. (Extinct)

Phalacrocorax olivaceus?

Phoenicopterus, sp. (extinct)

Branta, sp.

Oxyura jamaicensis

Duck, sp. (unidentifiable radius)

Egret (small)

Fulica cf. americana

Passeriformes, sp.

Unidentified bones (one bone)

Morelia, Michoacan

^{Early Pleistocene? (Blancan?)}
^{Goleta formation}

Loc. 505 (= 1136)

Phalacrocorax new sp.

Yepomera, Chihuahua

Locs. 276, 286, 289

Middle Pliocene (Hemphillian)
Rincon of Yepomera fm.

Phoenicopterus stocki Miller, 1944

2 Branta, sp. 289 ⁽²²⁶⁵⁾

1 Anas, sp. 289

1 Oxyura, sp. 289

2 Duck, sps. (1 or 2 sps.)

2 Passeriformes, sps. ^{274 289}

2 Unidentified bones (two bones) 289

3 Anas, new sp.? (but see A. diazi) 284

^{Murray 1929}
^{new material, 1941}

^{Stock 1948 - revised}
^{for 1949}

^{Laure 1950 - complete}
^{revision}

Atotonilco, Jalisco

Late Pleistocene ?

Locs. 1835, 1836, 1837

Aechmophorus occidentalis	6	
Podilymbus podiceps	5 or 6	
Podiceps auritus?	1	
? Podiceps dominicus ?	1	
Phalacrocorax albociliatus? (small)	23	
Euxenura (?) new sp.	1	
Anas, sp. (teal)	5	
Anas, sp. (Mallard?)	3	
Branta? sp.	1	
Ducks, unidentified sps (37 bones)		
Oxyura, jamaicensis	8	
Eagle, sp.	2	
Falconiform (Neophrontops-like radius)	1	
Caracara prelutosus ?	1	
Quail sp.	2	
Fulica cf. americana	23	
Rallus (or Porzana)	1	
Shorebird	1	(check San Josecito) <u>NOT</u> <u>Burdinus</u> (supra 14)
Passeriformes, sps.	6	
Unidentified bones	55	

total 169

Right scapula - eagle

Acromion more markedly flared toward internal side than in Agnula & scar delimiting the acromial area distally terminates more proximally (in Agnula it comes onto dorsal side here)

Has straight, stout shaft like *Mapleswoodwardi* but acromion more flared in & up than " " as well as given

Unlike *Neomys* in absence of deep foramen ventrally

Try Bules

Eagle pedal phalanges also (D = P 2)

Quail coracoid [listed p. 4]

Cornucopia 1 distal end fibula tarsus small (listed on p. 4)
" " " ulna medium

Ducks 1 comp small coracoid R mallard? listed p. 5
" " " "

1 prox frag med " L

1 middle frag. lay " L

2 distal ends coracoids

1 prox end ulna

1 manubrium

1 dist end small humerus

1 " " tarsus lacking int. condyle

→ listed p. 4

Rail 1 prox 3/4 tarsus smaller than *elegans* or *levis* 8 vertebrae

Coot 3 dist end tibia, 4 amers VII

1 prox " femur V

1 comp, 1 prox end coracoid V

1 dist end tarsus (2 hook only)

1 prox end carpus V

Sp. 3 scapulae

1 ulna comp, 1 dist. (tiny)

1 prox, 1 dist. end femora

2 dist end scapula

1 " " tibia

2 manubria

1 dist end humerus

1 prox end tiny radius

Passerine

1 prox end coracoid

1 scapula

1 prox end ulna

6 pedal phalanges (shaded by p. 4 or coat. shade)

1 tiny phalanx

3 dist end coracoids

1 shaft humerus

frag tibia (1

" humerus 1)

2 tibiae of tarsus

1 frag tiny coracoid

2000
50
2000

991 (5)
0001

Site 1029

Left scapula - stark. Although I have no Sabine at hand for comparison, Howard (1902: 196) states that in that genus, the head end is constricted, the acromion & glenoid facet bending together to form a narrow, deep concavity between (dorsally) & ventral surface is convex. *Ciconia maltha* is said to be ^{actually} shallower & broader dorsally. The Mexican fossil is even flatter than in *C. maltha*. *C. maltha* also is noted as having a depression dorsally below the coracoidal articulation - a depression which is absent in *Euxemura* (Howard 1902). The Mex. fossil lacks the depression. [Quatern. Br. 20.8 (Ex #242, 18.9).] Further resembles

Euxemura in muscle scar back of glenoid facet; it extends well onto ventral surface, ~~survives~~ ^{forms} ~~form~~ ^{as} does so. In *Ciconia* *Ciconia* & *C. maltha* it is more limited to the area around joint & the glenoid facet. Bone is even shallower dorsally than in *Ex* & resembles *Mycteria* and base of glenoid is rounded as in *Mycteria* but muscle scar in *Mycteria* cuts in more deeply ~~into~~ ^{into} glenoid ~~apophysis~~ ^{apophysis} and shaft is ~~relatively~~ ^{relatively} narrower rel. to breadth head end. Glenoid facet faces more dorsally than in *Mycteria*; flatness of prox end's, however, closest to *Mycteria*.

Euxemura (?) mexicana left scapula (vic) ^{lacking tip of coracoid} ^{+ vent. surface of acromion}

Diagnosis: Proximal end ^{dorsally} from acromion ^{thrust} ^{from} glenoid facet broad & shallow, without marked ^{depression} ^{at its proximal} external lip, facing more dorsally than externally; ligamentous scar posterior to glenoid facet extending ^{forward} prominent onto ventral surface

~~cont~~ contour of bone from posterior edge of glenoid facet to shaft ^{dorsally} smooth curve

Discussion: In size the specimen is close to *Ex galapagos*; ^{form} ^{with contour} ^{ant. ly} and extent of lig. attachment ^{on ventral side} as in that sp. area post to facet is more included in *C. gal.* & dorsal surface more defined



Loc 1835 (134 bones)
JRM 1006 site 1 upper beds

Atkinson page 2

Loc.	Bones
1835	134
1836	2
1837	44
	<u>180</u>

Duck

- 1L ^{comp, 1 hum.} 3 R Coracoids (Pintail?)
1 R " (Teal?)
3 R scapulae
2 manubria/sterna

- ✓ Coot?
1 prox end scap. 9, 14, 64 (large)
★ 1 distal end humerus 9, 14, 64 (very small 7.5 mm, smallest min 7.6.) X

Quail?
1 dist. end tibia, [distal p. 4]

~~Order?~~
+ scapula

- Is?
1 tiny dist. end humerus (tibia?)
1 dist end ulna (duck?)
1 small dist end ulna (sp?)
1 med " " (sp?)
1 manub. (sp?) [Coat? 9, 14, 64]
1 tiny frag carpo. (sp.) small
2 frags med tibia, (unident.?) [one may not be tib. of bird at all]

JRM 1029 site 1 (see also other side of paper)

Duck

- 2 L prox coracoids (pintail size?)
1 R comp " Mallard or large diving duck
1 L prox $\frac{3}{4}$ femur (pintail size)

- ✓ ★ Coot
1 dist end fibiotarsus 9, 14, 64 X

sp?
1 comp. small coracoid

- ✓ sp?
1 dist ^(half) end radius (size of turkey) Neophron tops (probably)
[2 pos] sep. 4

Site 2 JRM 971

- X 1 Dist end femur gube, Pod. podiceps

1835 JRM 1023

- ✓ Coot 3 dist end hum
1 coracoid, 1 prox end
1 max femur see other sheet
1 dist (tib) tarsus (no p. 2)

Loc 1835 (134 bones)
JRM 1006 site 1 upper beds

Antonides page 2

Loc.	Bones
1835	134
1836	2
1837	44
	180

Duck

- 1L, 3 R ^(comp, 1 hum) Coracoids (Pintail?)
1 R " (Teal?)
3 R scapulae
2 manubrium sterni

- ✓ Coot?
1 prox end scap. 9, 14, 64 (large)
★ 1 distal end humerus 9, 14, 64 (very small 7.5 mm humerul min 7.6.) X

Quail?
1 dist. end fibula, [listed p. 4]

~~Order?~~
+ scapula

- Is?
1 tiny dist. end humerus (teal?)
1 dist end ulna (duck?)
1 small dist end ulna (sp?)
1 med " " (sp?)
1 manub. (sp?) [Coat? 9, 14, 64]
1 frag frag carpo. (sp.) small
2 frags med fibula (unident.?) [one may not be fib. of bird at all]

JRM 1029 site 1 (see also other side of paper)

Duck

- 2 L prox coracoids (pintail size?)
1 R comp " Mallard or large diving duck
1 L prox 3/4 femur (pintail size)

- ✓ ★ Coot?
1 dist end fibiotarsus 9, 14, 64 X

sp?
1 comp. small coracoid

- ✓ sp?
1 dist ^(half) end radius (size of turkey) Neophronopsis (probably)
[2 pos] sep. 4

Site 2 JRM 971

- X 1 Dist end femur gube, Pod. podiceps

1835 JRM 1023

- ✓ Coot? 3 dist end humeri
1 cent coracoid, 1 prox cor
1 prox carpus
1 prox femur see other sheet
1 dist (med) tarsus (no p. 2)

La 1837 (44 Bones)
JRM 976 site 3

Otobonitro page 3

Duck

1 manus
1 dist end ulna

X Grebe (large)

1 dist end fibia. Arch. oc., 9.14.64

Sp. ? (small)

1 frag near post. end sacrum
1 vert

Site 3 JRM 989

Grebe

X prox + dist ends of R femur Arch oc., 9.14.64

Duck ~~coast~~

dist end small humerus

Site 3 JRM 992

Duck

1 L scapula

1 L prox coracoid (heel?)

1 L ulna " (slightly larger than the fore only)

2 dist end humerus

~~1 L scapula~~

X Coast 7. americana. 9.11.64

1 nearly comp L coracoid 9.14.64

2 dist end fibia (one unmeasurable) ✓✓ 9.14.64

1 " " ulna ✓ 9.14.64

Sp. ?

1 frag coracoid (duck? coast?)

1 dist end ulna (small)

1 prox end radius "

✓ prox frag tarsus - Caicara (apparently small comp to the pelvis, but too frag. to be sure)

6/17	35
4.7.15.5	30.2
	33.6

[illegible]~~Small fragment~~

7. Quelle - auch 90, 11
2. Dist. Has. hum

2 Dist frag. humerus mag ~~1.1.16~~

~~I put, ~~the~~ ~~the~~ ~~the~~~~
~~the ~~the~~ ~~the~~ ~~the~~~~

Stork Euxenna (?) n. sp. (1)

1 Scapula loc. 1835, JRM 1029 from [page 2a and 1a]

Cormorant, Phalacrocorax, small auritus-like (but smaller) (3)

depth br.
7.1 x 4.2 = width 49
5.9 = 6.1 m.
4.3 = depth 49

1 tarsometatarsus, loc. 1835, JRM 1029
1 distal end tibiotarsus 1835 " 1023 near pelagicus
1 distal end ulna 1835 " 1023 could be penic. or pelag.

from page 2a and page 1

Shorebird, sp. (size = Avocet; straight M1, ~~chagall-like~~ more like Kildeer
but ~~chagall-like~~ does not cut in distally
before M3 as in Kildeer) (1)
1 prox. end tarsometatarsus loc. 1835, JRM 1029
(from p. 2a do not duplicate)

Falconiform (?) Neophronopsis-like (1)

1 dist end radius, loc. 1035, JRM 1029
[from page 2 (do not duplicate)]

(2) Eagle sp.

1 Scapula loc. 1035, JRM 1023
1 D2 P2 " " " "

(3) Cassara, C. melutinus ? (size) (1)

1 prox. frag tarsometatarsus loc. 1835, JRM 992

Quail

1 dist end tibiotarsus loc. 1835, JRM 1006 [from p. 2]
" " " " 1023 [from p. 1]
1 coracoid

Rail

1 prox 3/4 tarsometatarsus loc. 1835, JRM 1023 [from p. 1]

Atotonileo Duck

53

page 5

Oxyura (Ruddy)

Humerus

(8)

✓ 1 shaft 1835 - JRM 1023

✓ 1 prox 1835 - JRM 1029

✓ 1 dist 1837 " 992

Ulna

✓ 1 nearly complete - 1035, JRM 1023

Femur

✓ 1 prox. end 1835 JRM 1023

✓ 1 " 3/4 1810 " 1029

Coracoid

✓ 1 nearly comp 1835 JRM 1023 (but much too small)

✓ 1 prox " " 1029 (possibly a 2nd frag. as well)

Anas (Teal)

(5)

Humerus

✓ 1 distal end 1835 JRM 1023

✓ 1 " " 1835 JRM 1006

Tibiotarsus

✓ 1 dist frag (ident?) 1835 JRM 1029

Ulna

✓ 1 dist 1837 JRM 992 (ident?)

Coracoid

✓ 1 comp? 1835 JRM 1006 (ident?)

Anas, sp. mallard or med-sized

(3)

Humerus

✓ 1 frag-dist. 1835 JRM 1029

Coracoid

✓ 1 nearly comp 1835 JRM 1029

1 prox 1835 JRM 1023

Duck sp?

(37)

8 frag coracoids (4 L, 4 R.)

1 scap.

1 furcula frag

1 dist tibia

1835 JRM 1029

4 coracoid (1 L, 3 R)

2 manubria

3 scap.

3 dist ulna

1835 JRM 1006

2 L frag coracoid + 3 prox dist.

1 manubria

2 scap.

1 prox ulna

1835 JRM 1023

Goose?

1 dist end radius - small Branta? loc 1035 JRM 1029

1 manubria 1837 JRM 992

1 dist ulna

2 L, 1 R prox ulna

2 dist humeri

1 scap

1837 - 992

Atotomiles 1835 & 1837 - COOTS (23) bones

Coracoids
1 comp, 1 prox. JRM 1023, loc. 1835
1 med. comp. " 992 loc 1837

indiv
1023 - 1
992 - 2
1006 - 1
1029 - 2
1014 - 1

Humeri
1 dist. (7.5 mm br.) JRM 1006, loc. 1835
2 " " 1029 " " (2 sizes)
2 " 1 med. " 992 " 1837

7 at least

Tibiae
1 dist JRM 1029, loc. 1835
3 " " 1023 " 1835
1 " frag " 1016 " 1837

Tarsometatarsi
1 dist, 1 prox, JRM 1029, loc. 1835
1 dist " 1023 loc 1835

Femur
1 prox. JRM 1023, loc. 1835

Scapula
1 prox (large) JRM 1006, loc. 1835

Ulna
2 dist JRM 1029, loc. 1835
1 dist " 992 " 1837
1 " frag " 1016 " 1837

Carpometacarpals
1 prox JRM 1023, loc 1835

Pedal phalanges
1 JRM 1016 loc 1837

Grebes 3 or 4 species

Trachymachus or. - 6 bones (5 indivs?)

1 dist + tibiae - JRM 976, loc. 1837

1 prox + dist R femur " 989 " 1837

1 prox tibiae " 1029 " 1835

1 prox coracoid " 1029 " 1835

2 dist humeri " 1016 " 1837 (2 indivs)

Podilymbus podiceps 6 bones, 5 indivs?

1 prox end R coracoid loc. 1837 (no other data)

1 prox end R femur JRM 1029 loc 1835

1 dist " humeri " " " "

(2 prox " tibiae " " " " dist. rather slim)

1 dist " femur " 971 loc 1835 (6.0 x 2.4 cm. original prox)

Grebe etc. possible Stambysauritis
prox coracoid smaller than Podilymbus JRM 1029, loc 1835

prox of coracoid dominant, 1 coracoid JRM 1029, loc 1835 (No other data)

Complete list of San Josecito birds recorded by L. Miller

(and HHoward)

1941, Condor:43:140-141; 1940, Condor, 42:154-156; 1942, ~~xxxxxx~~ UCZool.47:43
1943, UC Zool. 47:43-168; Howard, Condor 42:41-44

46

Nycticorax nycticorax -- coracoid

Small ducks (at least three species)-- "a few bones"; "two tarsi very yg.

Gymnogyps californianus -- more than a dozen fairly complete bones rep'ing
3 individuals: perfect tibia, tarsus, femur, humerus, metacarpus,
coracoid. Tendency to larger size than living condor.

Coragyps occidentalis -- second only to the raven in numbers -- in all
stages of development (nestling included)

Teratornis merriami -- cranium, 3 tarsi, femur, tibia, radius, 6 verts,
2 phalanges; probably at least 4 individuals.

Elanus leucurus -- 1 perfect tarsometatarsus

Parabuteo unicinctus -- "about 20 bones"

Aquila chrysaetos -- about 75 bones, including all the important limb bones,
coracoid, furcula, and rostrum.

Spizaetus grinnelli -- tarsus and coracoid

Wetmoregyps daggetti -- 2 coracoid, 1 tarsus

Neogyps errans -- 7 bones of at least 2 individuals: ulna, femur, tibia,
coracoid, cranium

Neophrontops americanus -- 27 bones including characteristic limb elements
and coracoid

Circus hudsonius -- at least 4 individuals representing both sexes

Polyborus prelutosus grinnelli TYPE tarsus no. 2709; assigned material,
10 tarsometatarsi, 2710-2719, ulnae 2723-2725; humeri (3), 2720-2722;
2 tibiae, 2735-2736, coracoid 2737, femur (4) 2731-2734, carpometa.
(5), 2726-2730

Falco mexicanus -- 40 bones, including nestlings

Falco sparverius -- 17 bones (no nestlings)

Cyrtonyx montezumae -- 80 bones including limb bones, coracoid and 2 crania

Dendrortyx (?) sp -- femur

Meleagris crassipes -- 90 bones (TYPE tarsometatarsus), including limb bones
coracoid -- both sexes? old and young

Fulica americana -- 2 tarsi (one large, one small)

Epirallus natator -- TYPE tarsus only

Palnumenius victima -- TYPE only

Indeterminate Wader -- fragmentary tarsometatarsus (size of avocet, but hear

Columba fasciata -- 9 bones: humerus, carpometacarpus, tarsus

Zenaidura macroura -- 1 tarsus, 2 carpi

Rhynchopsitta pachyrhyncha -- 9 bones: humerus, ulna carpus, femur, rostrum

Parrot indet. -- smaller than A. macao or A. militaris; size OK for

Amazona auropalliata but dif. osteologically

Geococcyx conklingi -- about 40 bones, including most of the limb elements

Tyto alba -- 95 bones

Otus asia -- 3 bones

Otus flammeolus -- 12 bones

Otus trichopsis -- 6 bones

Bubo virginianus -- several hundred bones including nestlings; mentions
great variation in stoutness

Bubo, sp. -- 1 fractured tarsus, longer and more slender

Glaucidium gnoma? -- 2 tibiae

Strix occidentalis -- 43 bones including nestlings

Cryptoglaux acadica -- 5 tarsi, 2 tibiae, 1 humerus, 1 ulna

Asio wilsonianus -- about 100 bones, most of them tarsi, some tibiae, femora
and coracoids (no young)

Cicaba virgata -- about 20 bones, most of which tarsi

Phalaenoptilus nuttallii -- 1 humerus

Colaptes chrysoides -- doesn't say how many but mentions humerus

Corvus corax -- more than half of the bones, all stages of development

Small passerines -- very few bones of smaller passerines

TOTAL 40 sps., several thousand bones

OLD Records

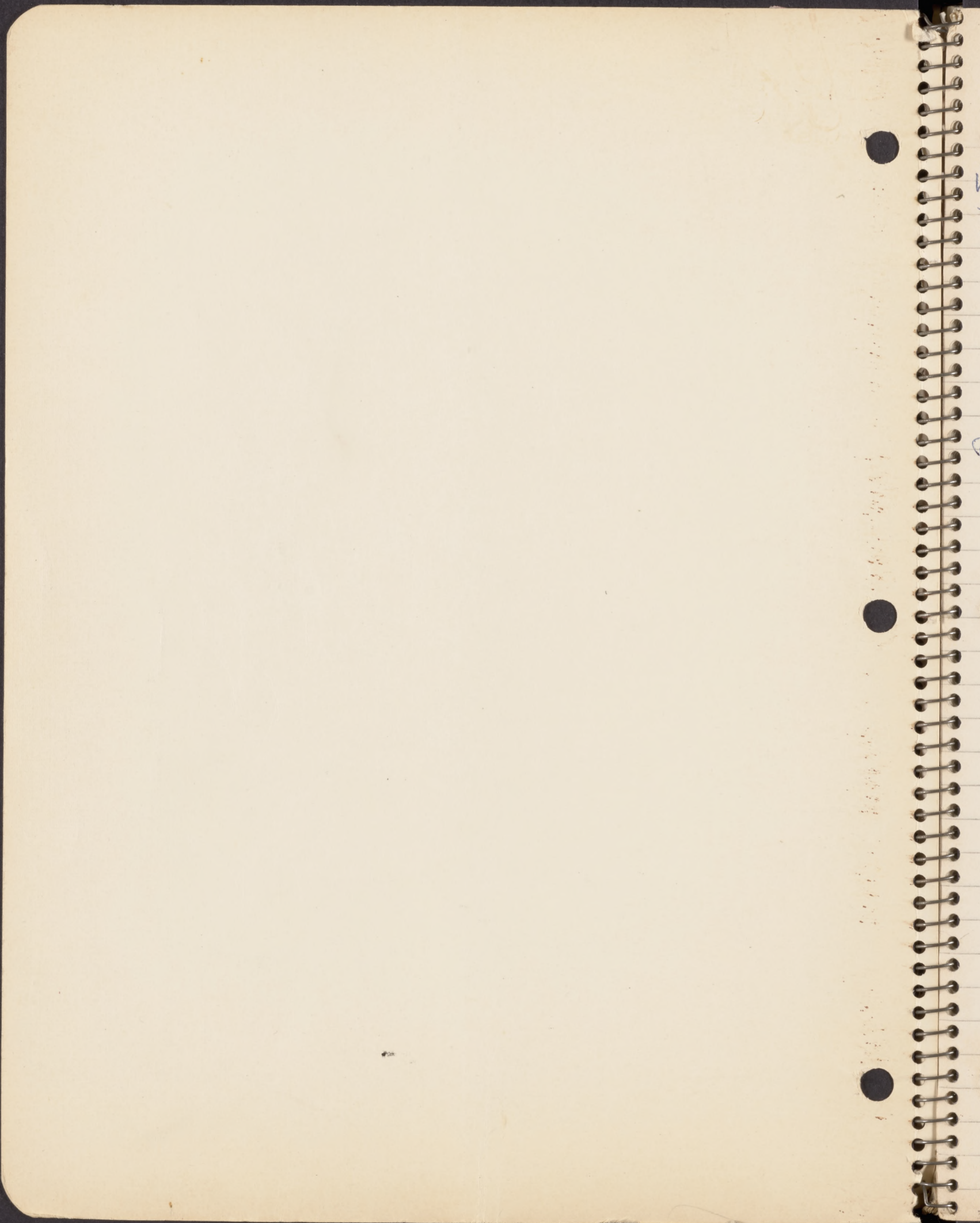
Complete review of
bird material in LACM
collections - 1962-63

~~See Valerius file
Back pages - rough
ideas on Valerius
material when 1st
under study~~

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Cal Tech Collection

Back, H. nick loc. no. 138

hosen
left
tier

Drawer 37A

Grebe - Podilymbus podiceps 1 tarsus

Ardia herodias - many

Caenecoditis albic - carpi (3) humus, coracoid, dist. fib. 3, tarsus

Glenda caerulea - 5 small trays

Nycticorax nycticorax 5 bones

Butorides virgatus - 6 bones (2 carpi, 2 tarsi, 1 cora, 1 fib.)

* Ciconia maclurei - 3 1/2 large trays

" " - 1 large tray + jaws

Geese - Branta canadensis several trays

* Anser anser - 1 large tray (equivalent in 2)

Anas platyrhynchos - 1/2 large tray

Drawer 37C

Anas platyrhynchos - many

Chaulelasmus streperus - 10 trays

Mareca americana - 1 1/2 trays

Spatula clypeata - 10 trays

Nyroca americana, N. affinis many

Charitonetta albeola many

Querquedula cyanoptera - many (in 2 large trays)

Dafila acuta many

Nelion carolinensis many

Colaptes auratus, more of this, more of this, Cragys occidentalis - together in 1 large tray

* Peragyps occidentalis + Neogyps errans (see 37E also) in 1 large tray

* Teratornis merriami in 2 1/2 large trays

* Gymnogyps californicus? 1/2 " 4

* Neogyps errans 1 large tray

* Neophronotops americanus 2 large trays + 2 small in another

Accipiter cooperii + A. s. velox - 1/2 d, 1 large tray

Butor borealis, 2 large trays, 1 1/2 large trays, regalis 1/2 large tray (see also 37G)

Butor regalis 1 tray

* Hypomorphus fragilis 3 large trays

* Spizella quinquecoloris - 2 small trays with fragilis

Capula chrysactes

Drawer 37B

37C

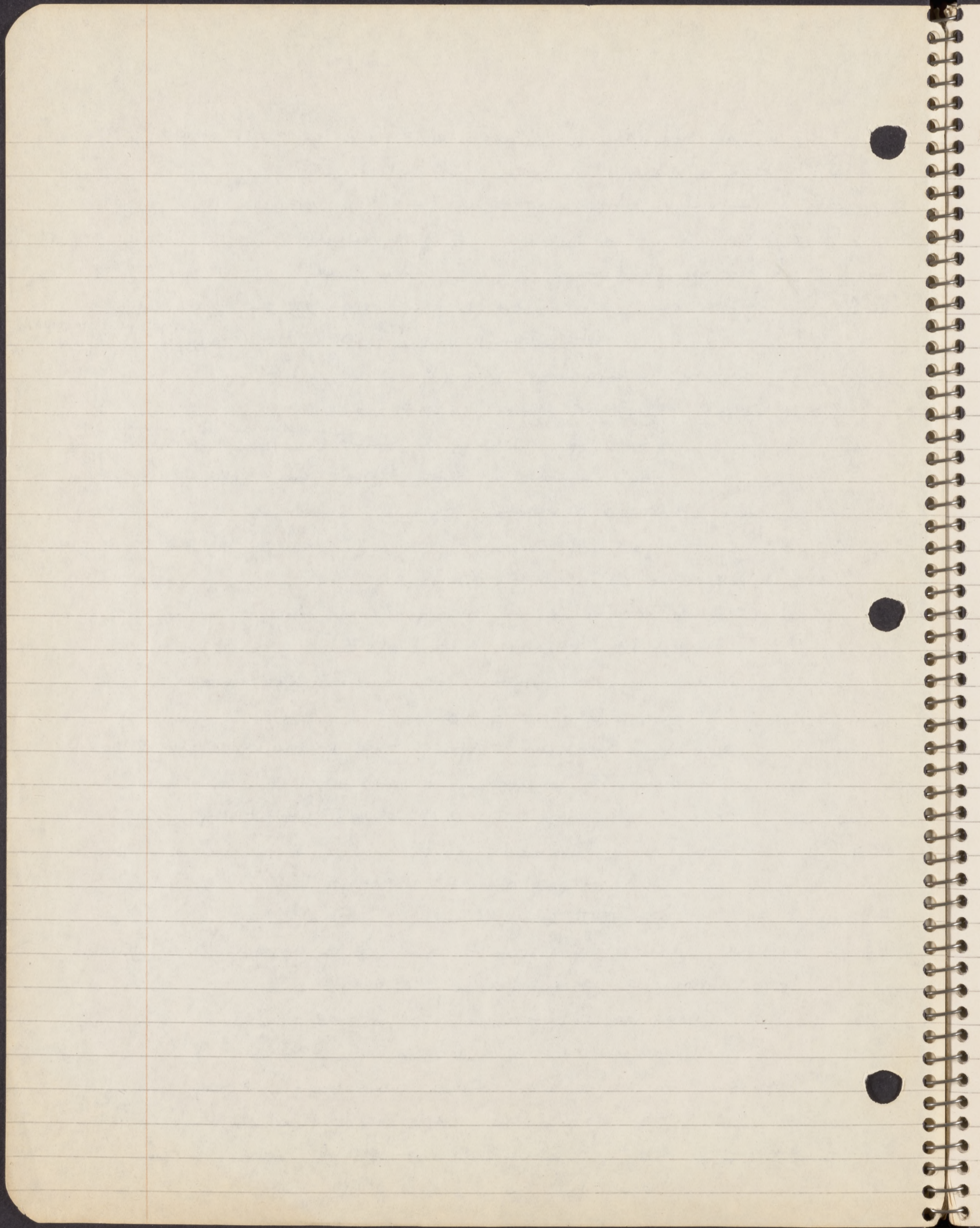
37D

37E

37F

37G

37H, I and 38A



Caltech collection

San Jacinto Cave - recorded by Loye Miller (catalogued)
Drawer 36 I

Dec. 192

Gymnogyps californianus - humerus, carpus, tibia, tarsus, femur ^{exposed}

Teratornis merriami - humerus, tarsus, femur, cranium

Ceragyps occidentalis - humerus, ulna, tibia, tarsus, femur, carpus, coracoid, cranium

Neogyps errans - ulna, coracoid, pat. part of cranium

Aquila chrysaetos - humerus, tarsus, ^{tibia} femur, carpus, coracoid, ulna, beak
(uncatalogued (not named))

Ceragyps occidentalis - ~~g~~ some immature

Neophontops amercianus

Aquila chrysaetos

Tyto alba

Polyborus

To be catalogued:

- ✓ 3 lolls. from Anacapa
Vallejo material
- ✓ Lake Chapala material
- ✓ District Zumbango, Mexico
- ✓ Rincon Mexico locs 276 & 289
- ✓ Yepomea Mexico loc 286
- ✓ San Pedro Valley, Arizona
- ✓ Loc. Cody Wyo. (1 bone)
- Thousand Creek Nevada loc 63
- Harbor Freeway
- Rome Oregon - 1 feather
- ✓ Santa Rosa Id
- Unrecorded Smith Creek Camp
- " Mancalla & the Pleistocene

Case 1 drawer 5 (left tier)
 Vallereto birds in new cabinet further west in 3rd floor hall
 Drawer labelled Schilling Case & Vallereto Birds.

1358
 3753
 1605

Galliform (Turkey? ~~as a result?~~) parts of 2 humeri, sternum

Columbiform Cecropophorus? tarsus (2)

Cursoriform Goose - 2 frags humerus large

Goose? ceratoid² frags - med

Duck? Prox end humerus large

1356
 3769

Falconiform - Nephrotops - dist. end tarsus, large

Eagle - sp. 2 pedal phalanges

Trogonis incredibilis - radius (dist.)

Falco sp. prox tip humerus

1318
 3803

1319
 3804

Duck carphometacarpus⁽²⁾, ulna, ceratoid

1114
 3865
 2554

1250.2
 3351

1249
 3717

Strigiform - Rostrum small owl

Passeriform - Corvus carphometacarpus

Humerus sp? (comp), 1 dist.

Low, mandible^{etc} in matrix

Quercus?

Coracoid in matrix

frags of humerus & femur loc 1323

" sacrum & ulna loc. 1358

one distal end femur loc. 1297

one comp. passerine carphometacarpus loc. 1250.3

one prox end ulna TD 78, loc. 1433

Two phalanges - owl? loc. 1449

1 coracoid, carphometacarpus & frags loc 1430

1 prox end ulna in matrix (loc. ?)

1250.3
 3349

1449

where is it?

Duck

2 Carpalometacarpus (prox)

1 " small?

1 coracoid nearly complete

1 " (prox.)

1 ulna (")

1 " (dist)

Goose

1 coracoid (sternal end)

Further study - recording needed

* = recorded in Downs but only in a general way (see ref. at bottom of page)

Lago de Chapala ^{← Late Pleistocene} various locs. Drawer 45 E

? loc. 1283 (A 6392; 55-56)

closer
to
San Marcos
than Chapala?

1 distal end humerus - diving duck or railed

1 prox. end tibia radius

1 dist. end " tibiotarsus (passerine?)

loc. 1176 (TD 514)

* 1 nearly complete coracoid (goose or flamingo?)

loc. 1129

* X 1 complete R. tarsometatarsus - small cormorant

1 distal end carpalometacarpus - ibid?

1 distal end half ulna - slender (cormorant?)

X 1 " " humerus (badly crushed) small cormorant?

* X (T.D. 501) 1 femur (nearly complete) small cormorant

X 1 coracoid (upper end) " "

1 " " " passerine?

and 2 small reptile bones

loc. 1129 cont'd (no TD nos. on bones)

* X 1 dist. end tibiotarsus small cormorant

1 dist. half (broken end) ulna - ibid?

1 frag. shaft of humerus (?) - "

1 dist. end carpalometacarpus (small) "

" TD # 487 - 1 lower end coracoid - goose?

Only published record is Downs, 1958, Fossil Vertebrates from Lago de Chapala, Jalisco, Mexico. Congreso Geológico Internacional XX Sesión, Mex. 1956, Sección VII Paleon. Taxon., Evol., pp 75-77. On p. 77 "Fossils from the type Chapala formation (Palmer 1926), dipping lacustrine sediment exposed adjacent to north of the lake shore include fish, a crocodile, turtles, probable Mexican cormorant & flamingo, Cuvierornis sp., Equus cf. laevis, Namites - & small peccary."

Hill, 1955, Contrib Mus. Paleont. Univ. Mich. 12 (5): 47-96 on 'Pleistocene, parts',
from Upper Becerra fm., Valley of Tequisquiaco, Mexico. Records a *Bird tarsus*
from Instituto de Geología, Univ. Nac. Autónoma de Mex., No. 49-26A from loc. 8 of Becerra
tectatulus identified by Bob Storer as *Toxostoma ocellatum* (Storer 1954; Wilson Bull. 66: 144-145)

From Cal Tech locality catalog.

loc. 308 - Barranca del Muerto, Municipio de Tequisquiaco,
Dist. Zumpango, Mexico.

loc. 309 - Barranca del Rio Grande, Municipio de
Dist. Zumpango, Mex.

loc. 310 - Kilometro 61 del Gran Canal, Municipio " "
Dist. Zumpango, Mex.

loc. 311 - La Cantera Vieja, Municipio de Tequisquiaco
Dist. Zumpango, Mex.

loc. 296 - Rincon, Chihuahua, Mexico, Arroyo ~~de los Burros~~
Patterson's field locs: ~~1136~~ R 4

loc. 505 - "Galea no. 2" Morelia lacustrine Basin,
"Galea fm." E. of Morelia, State of Michoacan, Mex.
Fossils taken from clays of badland exposures on
so. side of barranca up to 7' above diatomite,
& 10' below it (little consolidated ss with proboscidean
remains & a bird coracoid [which see →]
Thus, could have been under loc. # 1136 →)

X loc. 289, - Rincon, Chihuahua, Mex. Arroyo de los Pozos Patterson
R-9
Phaenicopterus sterki from here - Pliocene

loc. 286 - $\frac{1}{4}$ mi east of town of Yepomea, Arroyo de los Barrancos ^{Blanco}
Patterson's field # R-10 - Pliocene (?)

X Type of *P. sterki* described by L. Miller. Wilson Bulletin 56 (2): 77-82
June, 1944, from loc. 289 (#3245) Said to be 10 frags from this
loc. all ^{possibly} but one of *P. sterki* Type locality (dist.); prox fem, 2 dist. humeri (left)
one of which is quite a bit larger than the other & may be a dif. species [this is the 10th bone?]
see also for correlating Plioc. Mex. Wilson Sci. Calif. Acad. Sci. Bull. 36: 98-104 & Storer, Eng. & Sci.
Monthly 11: 29-31; T. Geol. mexicana Bol. 13: 69-76, Lawrence 1950 (in my file). Source says Yepomea
corresponds to Hemphill Stage of the Pliocene of U.S. (= Mid Plioc.) [Blanco is higher & more clay than]

Nothing recorded from loc. 289 "flamingo"
P. stocki [check type material to see if all is together]
 Cal Tech collection

Distrito de Zumbango, Mexico Drawer 45 L

~~Distrito~~ loc. 308 1 prox. end smallest tibiotarsus ✓

loc. 309 1 caupometatarsus - eagle?

1 distal half radius "

loc. 310 1 " " "

2 coracoids (2 sps. duck)

1 incomplete humerus (duck) *Nyroca valisineria?*

1 large axis uetebra

loc. 311 1 nearly tarsometatarsus duck

1 dist. end + tibiotarsus passerine?

1 nearly complete humerus falconid (could be caracara?)

Rincon, Mexico Drawer 41 H Phocine?

loc. 276 1 dist. end humerus flamingo?

1 tiny dist. end ulna

Zumbango, Mexico

loc. 268 coll. Oct-Nov, 1931 by Wes Bliss

1 dist. end tibiotarsus, 1 dist. frag. caupometatarsus, flamingo
 1 dist. frag. tarsometatarsus, hawk, 1 phal. bird?

Drawer
43 L
Phocine

Morelia, Michoacán, Mexico - loc. 1136 (=C.I.T. 505?)

3166 1 dist. end humerus (small cormorant or jaeger?)

(labelled C.I.T. 505 - Bessom 6 May, '55)

1 nearly complete coracoid - small cormorant
 ("Solea #2, below diatomite")

Drawer
40 K

Loc. 289 - Rincon, Chihuahua, Mex. Arroyo de los Pinos Puber R-9.

See later page

1 Coracoid - duck

1 humerus - nearly complete

Drawer
40 E

Loc. 286 - $\frac{1}{4}$ mi east town of Yepomea, Mexico.

See later
page

3 anseriform bones (duck?) size OK for *Anas platyrhynchos*.

(Quas about length of humerus of *A. platyrhynchos* but more slender;
 ulna longer, now about quas diag? *Was onaka yepomense* + *humus*)

Ref. on the Blauau Magnew 1944 *Philos. Mag.* 9: 33-36 T 95A Bull 1948 vol 59, 549

loc 1952
loc 1953

locs. 1952 and 1953 east & west sides (respectively) of El Tecolote Rd,
in Laguna San Marcos & Laguna de Zacualco, Late Pleistocene
Near San Marcos, Jalisco, Mexico

no. NOT
needed → *Pelecanus erythrorhynchos*

LACM 18501 *Phalacrocorax* sp. extrict

LACM 9741 *Mycteria wetmorei* Howard?

no. NOT
needed LACM 9737 *Ardea herodias*

LACM 9738 *Thaenictophorus* sp. extrict

LACM 18505, *Ardea herodias*

LACM 18502 *Chen hyperborea*

LACM 18504 *Anas acuta*

LACM 18503 *Aythya affinis*

LACM 9740 *Buteo galus fragilis* (Miller)

humus 9742 + 18499
carpus 9739
ant. and lower jaw 18500

4 bones

1 frag. humerus

1 carponetacarpus kept

1 proximal humerus

proximal end of left humerus vertebrae
Very large.

1 prox. R humerus

1 prox. R humerus

3 coracoids

1 distal end left humerus

recorded
by
Howard
1969

no. NOT
needed

30H ~~31A~~

Cal Tech Collection Phoenix, Arizona - San Pedro Valley

4699

Swan? prox. end femur

Two tiny distal ends tibiae

One med. prox. " "

Two small distal ends ulnae

One proximal end carpometa tarsus (tiny)

One distal end humerus (tiny; passerine?)

One distal end tarsometatarsus (small duck?) smashed

One " " coracoid - sp?

One prox. frag. humerus (rail? or?)

One distal end coracoid - large swan (*C. baccinatus*?)

One distal " humerus (med. size)

Probably CIT loc #110

"Curto Ranch loc." where rodent etc

nest. was found 2 1/2 mi NE of

Curto Ranch lat 31° 50'

long 110° 10'

Benson ☐

See Wetmore, 1924. Proc. U.S. Nat. Mus. 64 (5) pp. 1-2

Upper Gila of "in Benson Arizona" according to Gazin

1942: Proc. U.S. Nat. Mus. 92: 475-518 This locality

is in the San Pedro Valley but the Cal Tech loc. #110 ~~111~~

is ~~probably~~ what is termed "Curto Ranch. Gazin

says he & Gansler called at Curto Ranch for CIT

in 1928 (Typed *Sturnypterus stocki* ^{Stinton 1931} was collected there then)

Is the above from loc. ~~110~~ 110? 2-3 1/2 mi. NE Curto Ranch

from Curto Ranch Wetmore records

Odontophoridae indet; *Chloroceryle* ^{Columba} *micula* n. sp.; *Fringillidae* indet

from Benson site (older than Curto Ranch comes Anabernick

& *D. evermanni*, ⁽¹⁾*Colymbus* sp., ⁽²⁾*Anas* (Teal) sp., *Anatidae* indet,

12 ⁽³⁾*Colinus* sp.; *Gallinula* sp., *Micropalama hesperus* n. sp.)

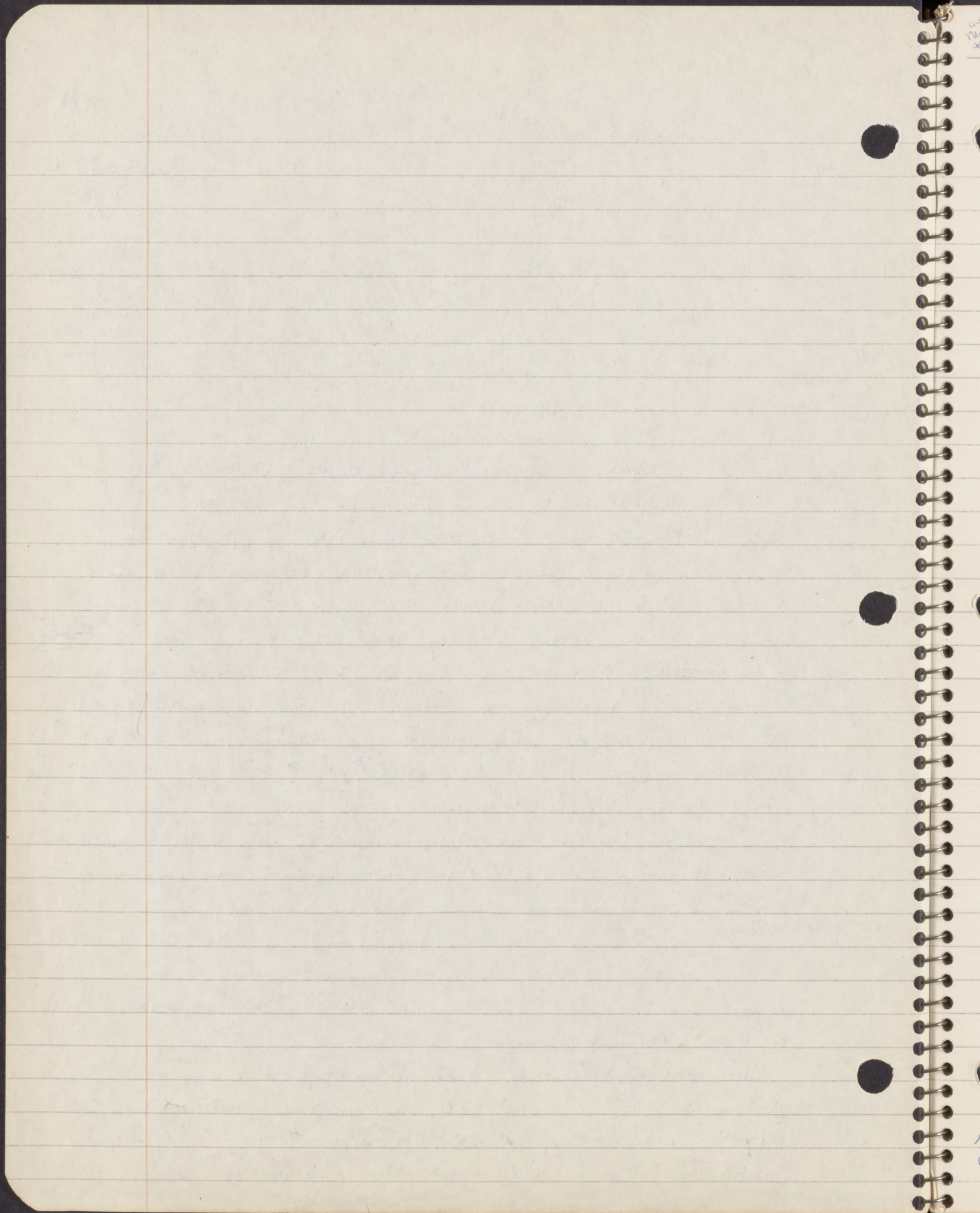
Conus sp., *Junco* sp., *Fringillid* indet, *Vettia bembieri* ^(type from Benson)

was recognized later by Wetmore (1944 Univ. Kansas Sci. Bull. ~~Vol. 30~~ Vol. 30, pt. 1,

no. 9 pp. 92-94 (ref to Aug's bone p. 94)

The town of Benson is shown on topo map ^(1915 ed.) about 1/2 mi. west of San Pedro River on R. 20 E and mid-way between T 16 S and T 19 S (110° 18' by 31° 12' ^{Pat.} or 58° 1/2') in Cochise Co.)

Curto Ranch is ap. 110° 10' X 31° 50' (slightly SE of Benson)



all
this
is
new

Netmore 1943, Condor 45: 120 reports from Gray Ranch. Below Wickieup Post Ma, Mohave Co, Ariz.
 1/2 prox end coracoid of swan (frag. of humerus?) Harzane from specimens, now US Nat Mus No 15772
 Netmore, 1957, Condor 59: 267-268. Rallus philippsi n. sp. Refers to swan & as the no other
 records in between from this loc. He says Phillips sent this type of R. philippsi, & that Phillips has more
 swan from this site. Note: I have specimens from Aug 1957 on loan & have examined coracoid & humerus - see
 unnumbered pages at back of this book. I check the C, T call for swan especially. also look for R. philippsi
 (type = swan) in USN. Mus.

Cal Tech Collection

Drawer 25 G

loc. 460 - Wickieup, Arizona called by Otto McKenna in 1949

- ? 460/3964 - distal half humerus - ~~swan~~ Ciconia maltha?
- ? no # prox. " coracoid - " Ciconia maltha?
- 460/3991 - dist. end tibiotarsus - goose or swan
- 3989 - " " " smaller "?
- 3965 " " " eagle
- 3944 " " ulna ~~tear~~? swan
- 3986 " " " ~~tear~~? "
- 3979 prox " tarsometatarsus goose?
- 3985 dist " " large diver, ~~duck~~? ^{goose}
- 3984 " " " large Man 3985, sp?
- X 39777 wing phalanx sp?
- 3997 } dist. end ulna duck
- 3991 }
- 3994 prox " femur "
- 3998 + 3993 - 2 prox ends radius sp?
- 3996 dist. end radius duck?
- 3966 dist end humerus ~~tear~~ ^{swan} (same?)
- 3983 " " carpalometacarpus sp?
- 3976 frag. prox end coracoid duck?
- 3980 }
- X 3995 } pedal phals. (may not all be bird (3))
- 460/ no. # } (3992 ped. phal. is mammal)
- X 3973 post. end of cranium
- ? 3981 middle section of femur large goose or swan?
- 3978, 3970, 3975, 3987 vertebrae sp? ~~duck~~
- 3972, 3982, 3969, 3962, 3 dist. ends humeri ~~three~~ ^{three} sps. ~~tear~~ ^{may be}
- 3967 and 3990 prox. end humeri (2) two sps.
- ? 3988 dist end very large radius (tear ^{tear} ~~tear~~ ^{tear} swan)

LOS ANGELES COUNTY MUSEUM

LOS ANGELES COUNTY MUSEUM

3982 dist. humerus
 3990 prox. large coat?

goose coat, ^{goose}
 3972, 3982, 3969

speaking
 on water

Wickieup is on Big Sandy River, Mohave Co, Ariz. about 40 mi
 NE of Kingman & about 40 mi E of Calif. Boarder, ~~38~~ ^{at} NE of Parker Dam
 slightly N of center of state of Ariz. but well to west ^{about between} 66 & 69/70

Col. T. J. Collins
P. 55

100/300 - 100/300

100/300 - 100/300

100/300 - 100/300

100/300 - 100/300

100/300 - 100/300

100/300 - 100/300

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100/300 - 100/300

100/300 - 100/300

100/300 - 100/300

Seed, Miller Condor 46; 25-32, 1944. Those checked in red below are needed.

★ below to be identified & possibly needed
Total 33 specimens ^{uncat'd} ₆₂

Cal Tech collection Loc. 61, 62, ~~63~~ Drawer 22 J

XX 62 ^{no 4657} 2 scapulae - swan (ident. by L. Miller) Dry Creek, Ore.

X 62 Braula diebeyi @ L. Miller Plover

X prox end ceratoid L 4666 (no. not recorded but specimen was)

X 3236 complete " R figured Miller 1944 p. 28 fig. 6 (right)

X 3233 prox end tarsus.

X 3232 dist. " tibia.

X 3234 prox end carpalometatarsus R

X 3235 mandible of sterna. ~~4665~~

X no # frag. costal area " 4665 (no. not recorded but specimen was)

X no # pedal phal. 4664 (no. not recorded but specimen was)

X no # vertebrae 4663 (no. not recorded but specimen was)

Goose smaller than B. diebeyi @ L. Miller

no # prox & dist. ends of carpalometatarsus 4658 & 4660

no # dist end tarsometatarsus 4662

no # prox " femur 4661

no # dist. " coracoid 4659

Phalacrocorax auritus @ L. Miller

X 3242 prox end humerus

X 3241 " " coracoid

~~Red~~ P. erythrorhynchos (2) recorded tentatively Pelican? (L. Miller Wright; was this recorded?) ^{yes}

X loc. ~~62~~ (62) (1928 expd. Owyhee Plover, Dry Creek Oregon)

X 1, prox, 2 dist ends femur (not 3238 on all three) ^{Pelican erythrorhynchos?}

★ 62 unidentified Bird

62/2 humerus? unidentifiable (unnumbered)

no # ⁴⁶⁵³ middle trochlea of distal end of tarsometatarsus (goose? swan?)

no # ⁴⁶⁵⁴ small scapula

4680 no # ⁴⁶⁶⁷ coracoid, vert., dist. end small ⁴⁶⁶⁹ tarsometatarsus prox ⁴⁶⁶⁸ carpalometatarsus

no # 2 dist. ⁴⁶⁷¹ ulnae, dist. ⁴⁶⁷² tibiae (coracoid), prox. ⁴⁶⁷³⁻⁴⁶⁷⁴ humerus, prox ⁴⁶⁷⁰ coracoid, dist. ^{unnumbered} carpalometatarsus

no # 3 pedal phal. 4654

no # 5 prox. radia, 4677, 4678, 4679 (three small) 4676 dist. frag. humerus

no # 2 carapiforms 4675

Eagle etc frag dist end tarsus # 3237

identified
by
Miller

Loc 22 continued

Stork left & right pinnated coracoid #3239

" head humerus

" long. scut.

" frag. furcula

" head humerus

Swan sp. sternum (manubriale)

Goose (too small for *B. dieckmanni*) humerus distal

Loc 62 continued

See L. Miller, Condor 46: 25-32, 1944. These recorded checked in red X
Where is shaft of tarsus of eagle? Miller doesn't give loc.
★ = unidentified (There are 5, all in 118)

Cal Tech Coll, Snake River, Idaho Drawer 26 L

- X Loc. 118/3231 Quercus emmenecana dent. by L. Miller ^{distr}
- X ^{Miller records} 118/3240 ^{stork or} ~~Caulalensis~~? ^{dist} tibia ^{recorded as Ciconia} ^{unident. for} ^{malta}
- ★ not prox. tibiotarsus + dist. tibiotarsus - cool? 4684-85
- ★ not scapula unidentified 4685
- ★ not prox end coracoid. " 4686
- X ^{recorded} ^{loc 122} 122/12240# middle portion of ⁴⁶⁹¹ sternum - Swan ident by L. Miller ^{script to have access for technical look}
- X Loc 122 not dist. end humerus ⁴⁶⁹² ^{might be B. eschscholtzi? says Miller} ^{goose} ^{smaller than B. dickcippi} ^{2x Miller}
- Loc. 122 Stork (in L. Miller's writing)
- XX 3239 prox. coracoid (two)
- X c not head of humerus 4687
- c not frag. sacrum 4688
- X d not " furcula 4690
- e not " vertebra 4689

¹¹⁸ Loc. 7, Cliffs on No. side of Snake R. - 5 miles N.W. of
Grandview 1932 field party

2 ★ unidentified

unnumbered - distal end humerus (goose?) 4681

Locs 120 & 121 from this area are definitely in
Pleistocene, or to

Pleistocene? Miller says Loc 122 is at Barber's Ranch ^{so ridge} on Snake River, ^{3.8 miles} ~~W. of~~ ^{W. of} ~~Barber's~~
east of Bureau Mt. Home Bridge
Stork says could be early
Pleistocene 8,27,48
L-118 Snake River, Idaho, 13 mi NW Grandview

✓ Cal Tech loc. 230 - Cond, Wyo & Eugene Drawer 1C
1 distal end tibiotarsus - try Paragrus # 4652

See later page for full list

Merriam, 1911, U.C. Pub. ^{Geol.} ~~Geol.~~ ^{vol. 6} (11/14/1911-30) ^{on 1000 Creek}
 Geol. ~~vol. 6~~ (11/14/1911-30) ^{say 1000 Creek}
 Geol. ~~vol. 6~~ (11/14/1911-30) ^{both distal}
 Geol. ~~vol. 6~~ (11/14/1911-30) ^{white?}
 Geol. ~~vol. 6~~ (11/14/1911-30) ^{earlier than Blaine}

Cal Tech collection

Drawer 24 B - Phoenix?

Dec. 63 - Thousand Creek Nevada W. of Hot Springs (1928)

Prox. end tarsometatarsus (grebe?)

" " scapula (no foramen) good size ~~small~~

" " coracoid duck?

Dec. 63/495 Dist. half. humerus, *Fulica* sp. @ L. Miller

no # " " small " unidentified

no # coracoid duck?

no # distal end humerus (small duck or coot?)

Merriam
 says mill
 refers as
 similar to
 one at
 Humboldt Co. Nev.
 re. e. lens.

In studying these bones, refer also to L. Miller in Merriam
 1916, U.C. Geol. 9: 173 reporting on U.C. bones of birds from
 Cedar Mt., Nevada [dist. humerus *Nettion carolinense*,
 prox. humerus near *Manila collaris*; dist. tibia *Manila collaris*,
 prox. ulna near *Pterygosternus cyanoptera* + frag. furcula, undet.
 coll. 1912.

★ Can find no indication that the C 15 specimens
 were ever recorded.

Denver 7H Bells catalogue ✓
San Diego Plod, to be sorted

he. 1295 - Bird bones (frag.) to 3rd floor Beth Chasseé

Mammals include. Rodent teeth

Ac 1958 from
S.W. Mus. Acubertweg
112th St. 1957

Called
by C. N.
Howe

(Large mammal (carniv?)

Dine Wolf

Canis houns

Large (not domestic)

Small Canis

Gray case 3rd floor La mu. Channel Id. Exped. 1941
1 tarsometatarsus (in 2 prs) 1 dist end tibia tarsus Caracaras
colld by Richey 11.12.41 in sea cliff near mouth of Corral Canyon
Santa Rosa Id.

Drawer 32 J - 2 Boxes bird bones. Lonehorn Cave, Nevada
Leonard Roth Shells #2 U.C. excava A43-3

Drawer 31 K - Bird fauna - Rome, Nev. 102-47 grebe
Owyhee, Shells &

Basement -

Back area north

✓ Case 24 middle tier 3rd drawer from bottom Recent? ^{ulna, Pals birds}

✓ Case 23 1st tier from aisle, 6th drawer from bottom
OUT 1 dist. tibia turkey 1295/3857 + small box fragment 1295
had 1295 - Harbor freeway Removed to 3rd floor

Case 23 2nd tier from aisle, 1st drawer (bottom)
Maricopa far - many bird bones, Probably Recent

Case 23, 4th tier from aisle, 11th drawer from bottom
Santa Rosa Id. Kitchen midden } 1 box, 1 envelope } ^{bird bones}

✓ Case 23 3rd tier from aisle, 8th drawer from bottom
OUT C17 102-106 - 1 tray ident'd bones, Santa Rosa Id.
[2 trays + 1 pial unident, removed to 3rd floor]

(1 goose bones unrec'd)
(1 dist end humerus Carleton Canyon unrec'd)
Case 23, 3rd tier from aisle, 4th drawer from bottom
Santa Rosa bones removed to 3rd floor
→ unidentified

Case 23 4th tier from aisle, drawers 8, 9, 10 from bottom
San Nicolas Id. Kitchen midden

Case 23 5th tier - several drawers San Clemente Id.
Kitchen midden bones (some bird probably)

7, Case 22 4th tier from aisle 7 drawers from bottom
misc. case + other presumably recent mat. (some bird)

Basement continued

Leave it
at 2 pencils
per unit page

Case 22, 4th tier from aisle, 8 drawers from bottom

Stone Man Cave, grouse, pigeon, condor & sp.? 8-10 bones

BUT

Case 23, 2nd tier from aisle, 12th drawer from bottom

Baker
Newader

Loc. 252, Baker Creek Cave, 3 bones (Recent?)
Galeos of paucius tibiotarsus dist 3/4 Coracoid sp.? bottom end
Grouse yg. humerus (comp.) associated with sheep? (Mt.)

Case 22, 1st tier from aisle, 5 drawers from bottom

Smith Creek Cave birds identified & recorded by TH

OUT

Case 22, 1st tier from aisle, 1st (bottom) drawer

unrecorded Smith Creek (now on time floor)

Below Cast Room

Californiana - last row of drawers

San Joseito birds - nearest entry, some unidentified.

Central aisle case materials

Leave

✓

3rd tier, drawer 6 from bottom

Losberg Cave, N.M. Loc. 115K-

Recent? (passerine)
1 Tibio tarsus or rail

Cal Tash Localities

- 1 - 10 - John Day area, Oregon. John Day beds Mio?
- 11 " " " " " " " " " " " "
- 12 - 21 " " " " " " " " " " " "
- 22 - 32 - " " " " " " " " " " " "
- 33 - 36 Eastern wash Plants
- 37 - 39 - John Day
- 40 - Mascall - Oregon

Data on Stone Man Cave CIT loc. #414

See Science vol. 94 no. 2444 Oct. 31, 1941 pp 414 - 415
Hurlong, Ed. "Stone Man Cave, Shasta Co., Calif."

Quoted Ida de May ident. of

referred to
this sp because
type from
Shasta Co.
Samuel

G. amplius - frag. ulna (in several pieces)

Dendragapus fuliginosus, humerus (prox) & hum. sh. both left

Columba fasciata, humerus, ulna in shaft

Said to have accumulated data from Both Creek Cave
& Samuel Cave, but contains Archotherium^(?) & horse

Experiment 1

1. Introduction

The purpose of this experiment is to investigate the effect of temperature on the rate of reaction between hydrogen peroxide and potassium iodide. The reaction is as follows:

$$2H_2O_2 \rightarrow 2H_2O + O_2$$

The rate of reaction can be measured by the volume of oxygen gas produced over a given time period.

2. Materials and Apparatus

Materials: Hydrogen peroxide solution (10%), Potassium iodide solution (0.1M), Sulfuric acid (1M), Sodium thiosulfate solution (0.1M), Dilute hydrochloric acid (1M).

Apparatus: Conical flask, Delivery tube, Gas syringe, Stopwatch, Thermometer.

Procedure: A series of experiments were carried out at different temperatures. In each experiment, a fixed volume of hydrogen peroxide was mixed with a fixed volume of potassium iodide. The reaction was initiated by the addition of a small volume of sulfuric acid. The volume of oxygen gas produced was measured using a gas syringe.

Results: The following table shows the results of the experiments. The rate of reaction was found to increase with increasing temperature.

Conclusion: The rate of reaction between hydrogen peroxide and potassium iodide increases with increasing temperature.

MEXICO

✓ CIT loc. 286 Arroyo delas Barrancas Blancas, $\frac{1}{4}$ mi east of town of Yepomea, Chihuahua, Mexico Pliocene?

- ✓ 4618 - 2 per. furcula - duck *Paratyto Wasmata yepomeae* Hovind 1966
- ✓ 4619 - ulna " " " " " "
- ✓ 4620 - humerus " Type *Wasmata yepomeae* Hovind 1966

✓ CIT loc. 505 Golita formation, Michoacán, Mexico Pliocene

- ✓ 4652 - Coracoid - small cormorant *Phalacrocorax golitensis* Hovind 1965
- ✓ 3166 - Distal end humerus - small cormorant referred to " 1965

✓ CIT loc. 276 Rincon, Chihuahua, Mexico Pliocene

- ✓ 4616 - Distal end humerus - *Phoenicopterus stocki* ^{Miller} recorded by Hovind 1966
- ✓ 4617 - " " ulna (tiny) ~~Passerine~~ *Erolia?* sp. " "

✓ CIT loc. 289 Rincon, Chihuahua, Mexico Pliocene

- ✓ 4621 - Coracoid small duck *Anas fimbria* Wetmore ^{ref. by Hovind 1966}
- ✓ 4622 - humerus (lacking prox. end) passerine ^{Mimidae? Hovind 1966}

✓ 4623 - Tibiotarsus, prox. *Phoenicopterus stocki* ^{ref. by Miller 1944 without cat. #}

- 4624 - " dist. (ygg.) " " ^{Miller 1944}
- 4625 - Tarso-metatarsus " " " ^{recorded by H but included in Miller total of "9 bones"}
- 4626 - Tibiotarsus " yg " "
- 4627 - Ulna prox " "
- 4628 - Carpo-metacarpus frag " "

referred ✓

nos. not given in record

- 4629 - Humerus , dist. " " ? (larger) ^{recorded by Miller 1944}
- 4630 - " " " " OK " "

4631 - Ulna - prox half sp. ? (small)

- ✓ 3245 - Distal end tibiotarsus Type of *Phoenicopterus stocki* Miller
- ✓ 9732 Prox end radius *Phoenicopterus stocki* ^{recorded by Hovind 1966}
- ✓ 9733 Dist. radius " " " "
- ✓ 9734 Scapula " " " "
- ✓ 9735, 9736 R + L prox ends femora *Oxyura* sp. " " " "
- ✓ 9737 Scapula *Eremophila cf. ruficollis* Rudolph " " " "

OVER

MEXICO

Howard 1969
15 bones → CIT locs. 308-311 in Tequixquiac, Zumpango, Mexico
and 268 Pleistocene

loc. 308 - 4633 - Tibiotarsus (prox.) Passerine?

Howard 1969 309 - 4634 - Carpometacarpus (inc) ~~Eggs~~ Swan

4635 - Radius (dist) Eagle?

Howard 1969 ^{# element not} 310 - 4636 - Humerus (inc.) Duck (diver) ^{Aythya sp.}

4637 - Radius ($\frac{1}{2}$ dist) Sp. ? Buteo?

reworked Howard 1969 ^{# element not} 4638 - Vertebra (large, axis) ~~B. clarki~~

Howard 1969 4639 - Coracoid (comp) Duck (large)

Howard 1969 ^{# element not} 4640 - " (") Trail (~~small~~)

Howard 1969 4644 - Femur (comp.) Passerine (small)

Howard 1969 311 - 4641 - Humerus (nfy conf.) Caracara ^{melanoleuca}

Howard 1969 ~~268~~ 4642 - Tibiotarsus (dist.) Passerine

4643 - Tarsometatarsus (nfy comp) Duck ^{A. creca?} (small)

Howard 1969 268 - 4645 - ~~H. Ciconia?~~ ^{sp.} Tibiotarsus dist. ^{normal to same sp.} [frag carp.]

" " 4646 - Tarsometatarsus, dist frag. Eagle

4647 - Pedal phalanx frag. sp. ?

Lake Chapala LAM loc. 1129 Pleistocene

recorded by Howard 1969 20567 Pedal phalanx - P. ruber
" as unidentified bone 2771 - Coracoid (dist.) Goose

P. olivaceus H 1969 2773 - Tibiotarsus (dist.) Cormorant (small)

[unidentified bone "eggs" - hearn] 2774 - Carpometacarpus (cu) ^{COOT or rail} ~~tail~~ [Rallidae]

2772 - Ulna ("") ^{sp. Cerythya sp.} "duck"

✓ P. olivaceus Howard 1969 2775 - Ulna " Ceramorph (small)

✓ " " " 2777 - Carpometacarpus " "

✓ recorded by Howard 1969 2778 - Femur, Tarsus, Coracoid Cormorant Phalaropus

✓ Howard 1969 ~~2891~~ (two) no # - Coracoid ^{Phalaropus berypterus Murray} ~~small~~ ^{toothy} ~~humerus~~ ^{recorded 1/4/1969}

Lake Chapala LAM no 1283 Pleistocene

not recorded → 2767 - Humerus (dist) ^{Oxyura} ^{jamaicensis}
2769 - Radius
2768 - [Radius] & Tibiotarsus? passerine

Lake Chapala LAM 1176

recorded by Howard 1969 2770 - Coracoid Phoenicopetues ruber

Ectophr

⊙

33 Chendytes, & other avian remains from Anacapa Id.
box 1642 June 2-3, 1962 Field parts with Ed Mitchell cat #s 2725-2736
and 2738
Birds assoc'd with Peromyscus Bones banded & labeled
for study (Peromyscus # 4587 and 4588) in Drawer 39 I

Chendytes:

max R/L Tibio tarsus 2 individuals
dist 1/11
Right Prox $\frac{3}{4}$; prox tip; ~~dist end (does not belong with prox tip)~~
Left " $\frac{3}{4}$; prox tip; shaft & ~~dist end~~

1 ind, Femur

Right - prox $\frac{1}{2}$
left - nearly complete

Coracoid

Right complete "

Ulna

Pelvis - frags. of 1111 (one has pubis os)

R? complete

Vertebrae

Thoracic III

Cervical III

Lumbar? II

Caudal II

Sacral I

Scapula I

Low ramus h. articular; h. art. frag; L art.

Stemum - costal border

Not Chendytes - 1 humerus, small ^{shagbird} also;
Set 8 1 mandibular end stemum (small)

2697-2698

43 Chondytes; + other avian remains from Anacapa Id.
Aug. 14-16, 1960 Ed Mitchell & Jerry Lips. Cat #'s 2708-2724
and 2737

Chondytes Humerus

Right - nearly complete (dist uncomp);

Ulna

3 indiv.

Left, 2 complete; 3

Right, 3 distal ends

Coracoid

1 complete left; 1 prox R

1 indiv

T. brachyotus

Left - prox. Tib; dist frag.

Tarsometatarsus

L? (in 3 frags.)

Vertebrae

Thoracic 5+4

6 + 4 belong with 6 + connected atlas, axis + 3rd cerv.

Rib frags. - 8

Skull + mandible

Pedal phalanges 2

Tibulae - 2 (R + L)

Sternum - 3 frags (2 frags in place in matrix (coracoids)
1 good costal bone, 1 frag. costal bone, 1 manubrium)

Pelvis

(with 2 humeri connected)
1 nearly complete; 1 part. half in matrix
at least 1 other indiv. rep. by R + L acetabulae

+ 4 other frags

Scapula + Right

Other species R + L large Puffinus ^{griseus} humeri (2 wing phals.?) ↑

Carolinian monactis Alcid bone 1 R humerus; 1 R ulna; 1 scapula frag.

Psychorhamphus olivaceus 2 small? 1 carpalometacarpal, 1 dist. humerus

2 carpalometacarpals (large Puffinus?)

P. griseus

1 dist. radius

2 frags of skulls

Mal. americana

1 fibula prox

Mitchell
3085227
area 1642
LACMVP #1757
301, 302, 306, 307, 308
1964-1967

Below 2739 = loc 1642 (also 2758, 2761 = LACMVP #1763)
cat #s' 2739 - 2749 = coll. loc. 361 also 2758, 2761 = LACMVP #1763 (float)
2750 - 2753 = " " 362 - LACMVP #1763 (float)
2754 - 2757 = " " 360 also 2759 (= 360 + 361) 2763 - 2766 = 360
2762 = 366 = 1763 float

Chondrytes and other avian remains - Anacapa Id.
July 28, 1962 - Ed Mitchell & Gene Lepp cat. #s 2739 - 2766

Chondrytes
5 individuals

Tarsus: 3L complete (361); 1L complete (360); 1R complete (361);
1R prox, 1R dist (361) do not belong together R. L
1R " , 1L dist (362) both very fragmentary / float 1 1111
float 1 1
float 11

11 R prox
11 dist
complete

Tibia tarsus 1 L nearly complete (361) - in two pieces; 1 L dist
1 R prox half (361); 1 R prox, 1 R dist (361); 1 frag R prox (360)
1 R prox tip in 2 frags (361) - ident. tentative, seems small.
1 L dist, frag (362); 1 L prox frag (362) 1 R, 1 L prox (361) 1 R dist 361.

Tarsometatarsus 1 left nearly complete

Vertebrae 444

Ceracoid 1 L incl. (prox end) (361)

Quadrates 1

Skull 2 frag costal border

Ribs, 1111

Pelvis - frags - ~~not~~? 1 ant portion together

Ulna - 1 R (360)

~~Radius~~

Humerus 1 R comp in 3 pcs.

Ventura County
Loc 1642 = Mitchell 227, 360
Hammes #3
SE end of West Anacapa Id
("Big Anacapa") Pleistocene
dep. 25' above mean sea level
Loc 1763 - Back of Pleistocene
Terrace on SE end "Big Anacapa"
Id, July 28, 1962 Mitchell Hammes
361, 362, 366

Ptychoramphus aleuticus (360)

Several bones of 1 individ. ? Tarsus should be checked - seems stout for *P. aleuticus*; all other bones OK.

Skull of Alcid - *Ptychoramphus*?
(over)

Note Ed Mitchell loc 360 now called Mus. loc. 1757

366, 361 + 362 " " 1763

364 " " 1764

277 + 365 = 1642

same as
out post

Cheredyfer Quacapa Id. July 28, 1962, Ed Mitchell 2.7.63 (see former
page 8, 10)

3 L, 1 R femur (all but one complete, 5 tracks only head)

1 prox R "

1 dist R "

1 R 1 L nearly complete tibia tarsi (not males?)

1 R 1 L prox end "

1 R 1 L dist end "

1, frag vert at Quacapa end Sacrum + 2 frag pelvis bone

4 vertebrae

3 frags costal side sternum

1 R nearly complete humerus

1 prox end coracoid

1 frag furcula?

1 quadrate

1 articular end lower mandible

rib frag

Distal end femur, prox frag tibia

1 vert separate from thorax

2 frag prox tibia tarsi, sept^{apert} from above line

3 frag pelvis + sacrum " " " "

1 tarsus " " " "

1 Pterodroma coraci (complete); 1 skull + jaw (ident. to Pterodroma)

6 King's birds (archlet?)

1 frontal of skull (" ?)

Trabecula coniculate - assoc'd element

femur, scapula, coracoid, pelvis $\frac{1}{2}$, rib

Pterodroma albertus: bones of 1 indiv?

2 ulnae, 2 humeri, 2 femora, 1 coracoid, 1 tibia, sacrum, ribs, pelvis, phis

8.1.62

Tatao Chondytes from Anacapa Id. 1 Skull (unlabeled)

Indivs.

4

Ceracoid 2 R complete⁽¹⁹⁶⁰⁾; 1 R prox (1960)
1 L complete⁽¹⁹⁶⁰⁾; 1 L inc. (361)

2

Scapula 1 (1942); 1 (1960)

2

Humerus 1 R (361); 1 R (1960)

2

Ulna 2 R (1960 + 360)

3+

Sternum 2 representatives (1960); 1 (360 or 361?)

2

Tarsus 2 L (1960 + 361?)

9

Femur Right complete 1

4⁺¹⁺² Left complete  

" Prox  (2+1)

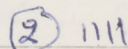
" prox

" Dist  (3+1)

" dist 1

9?

Tibia tarsus Right nearly complete → Left 1

 (2) IIII

" ← prox IIII

"  

" ← dist II

"    II

Tarsometatarsus (see above)

Vertebrae 36

8

pelvis & sacrum

~~sternum~~

1. $\log_{10} 100 = 2$

(100) $\log_{10} 100 = 2$

2. $\log_{10} 1000 = 3$

(1000) $\log_{10} 1000 = 3$

3. $\log_{10} 10000 = 4$

(10000) $\log_{10} 10000 = 4$

4. $\log_{10} 100000 = 5$

(100000) $\log_{10} 100000 = 5$

5. $\log_{10} 1000000 = 6$

(1000000) $\log_{10} 1000000 = 6$

6. $\log_{10} 10000000 = 7$

(10000000) $\log_{10} 10000000 = 7$

7. $\log_{10} 100000000 = 8$

(100000000) $\log_{10} 100000000 = 8$

8. $\log_{10} 1000000000 = 9$

(1000000000) $\log_{10} 1000000000 = 9$

9. $\log_{10} 10000000000 = 10$

(10000000000) $\log_{10} 10000000000 = 10$

10. $\log_{10} 100000000000 = 11$

(100000000000) $\log_{10} 100000000000 = 11$

11. $\log_{10} 1000000000000 = 12$

(1000000000000) $\log_{10} 1000000000000 = 12$

12. $\log_{10} 10000000000000 = 13$

(10000000000000) $\log_{10} 10000000000000 = 13$

13. $\log_{10} 100000000000000 = 14$

(100000000000000) $\log_{10} 100000000000000 = 14$

14. $\log_{10} 1000000000000000 = 15$

(1000000000000000) $\log_{10} 1000000000000000 = 15$

15. $\log_{10} 10000000000000000 = 16$

(10000000000000000) $\log_{10} 10000000000000000 = 16$

16. $\log_{10} 100000000000000000 = 17$

(100000000000000000) $\log_{10} 100000000000000000 = 17$

17. $\log_{10} 1000000000000000000 = 18$

(1000000000000000000) $\log_{10} 1000000000000000000 = 18$

18. $\log_{10} 10000000000000000000 = 19$

(10000000000000000000) $\log_{10} 10000000000000000000 = 19$

nos. in the 4000's were given since Miller's paper 1944. He records ^{some of} these specimens without numbers.

CIT Loc. 62 - Dry Creek, Oregon

Pliocene

- 3238 - ⁴ hum R & L dist., L prox. Pelicanus erythro. ? [recorded by Miller]
- 3232 - Tibiotarsus (dist) Branta dickens? ["]
- 3233 - Tarsometatarsus (prox) " " ["]
- 3234 - Carpometacarpus (prox) " " ["]
- 3235 - Femur (manubrial part) " " ["]
- 3236 - Coracoid complete " " ["]
- 4663 - Vertebra " " ["]
- 4664 - Pedal phalanx " " ["]
- 4665 - Costal border humerus " " ["]
- 4666 - Coracoid (frag. prox. " " [~~without~~ recorded]
- 3241 - Coracoid (prox) Phalacrocorax auritus [recorded Miller]
- 3242 - Humerus (") " " " "
- 4658 - Carpometacarpus (") } Indet. goose smaller than Branta dickens? [recorded by L. Miller but not specifically listed]
- 4659 - Coracoid (dist) }
- 4660 - Carpometacarpus (") }
- 4661 - Femur (prox) }
- 4662 - Tarsometatarsus dist. }
- 4657 - Scapulae (two) Swan sp. [Recorded by Miller]
- 3237 - Tarsometatarsus frag Indet. Eagle [" "]
- 4653 - " (dist frag.) sp. [unrecorded]
- 4654-55 3 pedal phalanges " "
- 4656 Scapulae (frag) " "
- 72 Humerus dist unident? "
- 4670 " prox sp. "
- 4671 2 ulnae (dist) " "
- 4672 Tibiotarsus dist (Cormorant small "
- 4673 Coracoid prox Goose (small "
- 4674 " " duck " "
- 4675 2 cuneiforms sp? "
- 4676 Humerus (dist frag) " "
- not Carpometacarpus " " "
- 4677-4679 radius (5) prox (2 large, 3 tiny) sp? "

Plants

Loc. CIT 61 West side Dry Creek Malheur Co. Oregon

4680 - Sacrum "Indet. bird" [Rec'd by Miller]

Loc. 62 { 4667 - Vert. bird sp. unrecorded

4668 - Coracoid " " (small) " "

4669 - Tibiotarsus dist " " (quail?) " "

Age? Loc. 47 - Rome Oregon "Oryzopsis fluitans

4710 - Limb Coracoid [unrecorded]

Loc. 63 - Thousand Creek, Nevada Pliocene

4693 - Coracoid Goose sp Unrecorded

4694 - Scapula " " " "

4695 - Tarsometatarsus (prox.) sp. ? " "

OK 495 495 - Humerus (dist.) "Tulica sp." @ L. Miller but

4696 - " " small duck } can't find record of publication

4697 - Coracoid med. duck } 3 unrecorded

4698 - Humerus dist. unident. ? } 3 unrecorded

Loc CIT 118 13 mi NW Grandview Snake River, Idaho

(3 1/2 mi from Brunneau Rd 323) 3239 Quasiamericana Tibiotarsus [Rec'd by L. Miller]

→ 3240 Tibiotarsus (dist) Ciconia maltha " "

Barbon Ranch Loc 122 { 3239 (2) Coracoids (prox) " " " "

Snake River 50.5 mi. 3 3/4 mi. east Brunneau - Mt. Home Bridge 4687 Humerus (head only) sp. ? unrecorded

4688-89 Sacrum vert frag " " "

4690 - Iliac " " "

4691 - Sternum " Sugar sp [Rec'd. Miller]

4692 - Humerus dist Goose indet " "

Loc. 118 Clifton No. side Snake River, 5 mi N. W of Grandview

4681 - Humerus (dist) Goose [unrecorded]

4682 - Ulna " sp. ? " "

4683 - 4684 Tibiotarsi dist & prox sp. ? " "

4685 Scapula " " "

4686 Coracoid " " "

- Loc ? CIT Sheafly Creek, Brunneau, Idaho Pliocene?

4711 Tarsometatarsus (prox) Grebe unrecorded

Joan from Amer. Mus. Nat. Hist. 644 Parcel
Sept. 4, 1962 received (sent Aug. 27) Parcel Post

Fossil
Lake

8 Humeri 3548 - 1

3546 $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ dist

3521 - $\frac{1}{2}$, 1

3 Ulna 3544, - 1, $\frac{3}{4}$ dist, $\frac{3}{4}$ prox

2 Carpae 3546, 1, $\frac{1}{2}$ prox

1 Femur 3500 - 1

2 Coracoi 3518 - 1

Anatarmacula?

16
3510 - 1

Character of Amer. Mus. Locust Lake humei

- 3548 comp. ① Capital shaft ridge prominent (as in mississila) & directed
towards ext. tab. (2.6 mm from edge of t)
② Attach ext head of ticeps 7.2 mm. to prox end 20.0

Character of type of *Quabernicula minuscula*
using char. described by Woolfeuden

- ① Capital shaft ridge fairly prominent but directed toward ext. tub.
- ② Area of attachment of ext. head of triceps narrower than ductile ^{20.8}
- ③ Area between attachment ext. head triceps, & ext. tub. elevated
(note also that a space exists which is not true of *Quabini* or *thunducka*
but is true also of *geese*)
- ④ Ext. tuberosity is higher with respect to head than in *ducks* (89% of height)
- ⑤ Like *Tadorna* & *casarca* in distal edge of ext. tub. almost flush w/ shaft
- ⑥ " " " " ext. head triceps narrow & capital shaft ridge curves
in toward ^{ext. edge}
- ⑦ Head not undercut & overhanging
- ⑧ ~~Dist. edge of ext. head of triceps~~ ^{br. triceps} 6.4, br. prox end 20.8
Diagonal depression across area of triceps attach ^{from ext. tub.} & down shaft ^{diag} to triceps attach under ^{prominent for}

La Brea Quabernicula K4688

- ① Capital shaft ridge less prom. than *Q. minuscula*
- ② Area attachment of triceps. 5.6 (br. prox 18.7)
- ③ Almost no space bet. triceps attach. & ext. tub.
- ④ Ext. tub. higher with respect to head than in *ducks* (same as type?)
- ⑤ Dist. edge of ext. tub. about as in type.
- ⑥ Same as type but ridge less pronounced
- ⑦ Head not undercut

9 Diag. dep. as in type. This does not exist in *Tadorna*
K4690 *La Brea* ⑧ Ridge slightly more than in *Q. minuscula*

- ② 5.4 : 18.6 meas triceps attach. & br. prox end,
- ③ About as in K4688, although more space at distal edge of tub.
- ④ as in K4688; ⑤ as in K4688; ⑥ also same
- ⑦ Same; 9 same

Other *La Brea* same

All fossil Lake & La Brea & Vallejo bone
 of ext. hum. compared to lit. of head measured from table.

Typomys 93.5, 90.7

Vallejo 94.3

La Brea 95.0, 92.3, 91.0, 93.0, 92.3, 92.9

Fossil 90.8, 90.0, 93.7, 94.3, 91.0, 94.0

Tadoma 93.3, 92.7

Geese 96.3, 97.9, 95.6

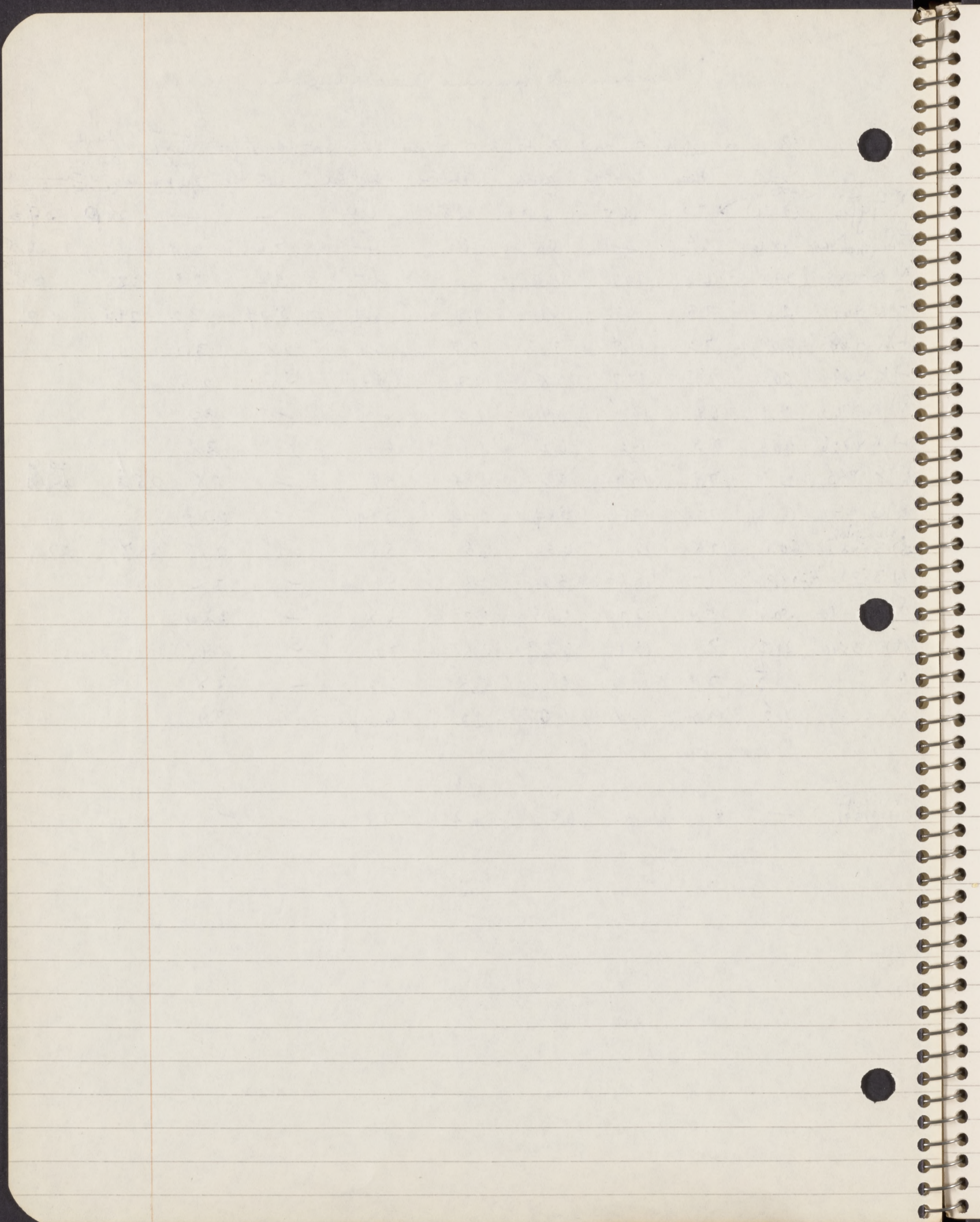
Ducks 86.3, 85.6, 87.2, 86.7

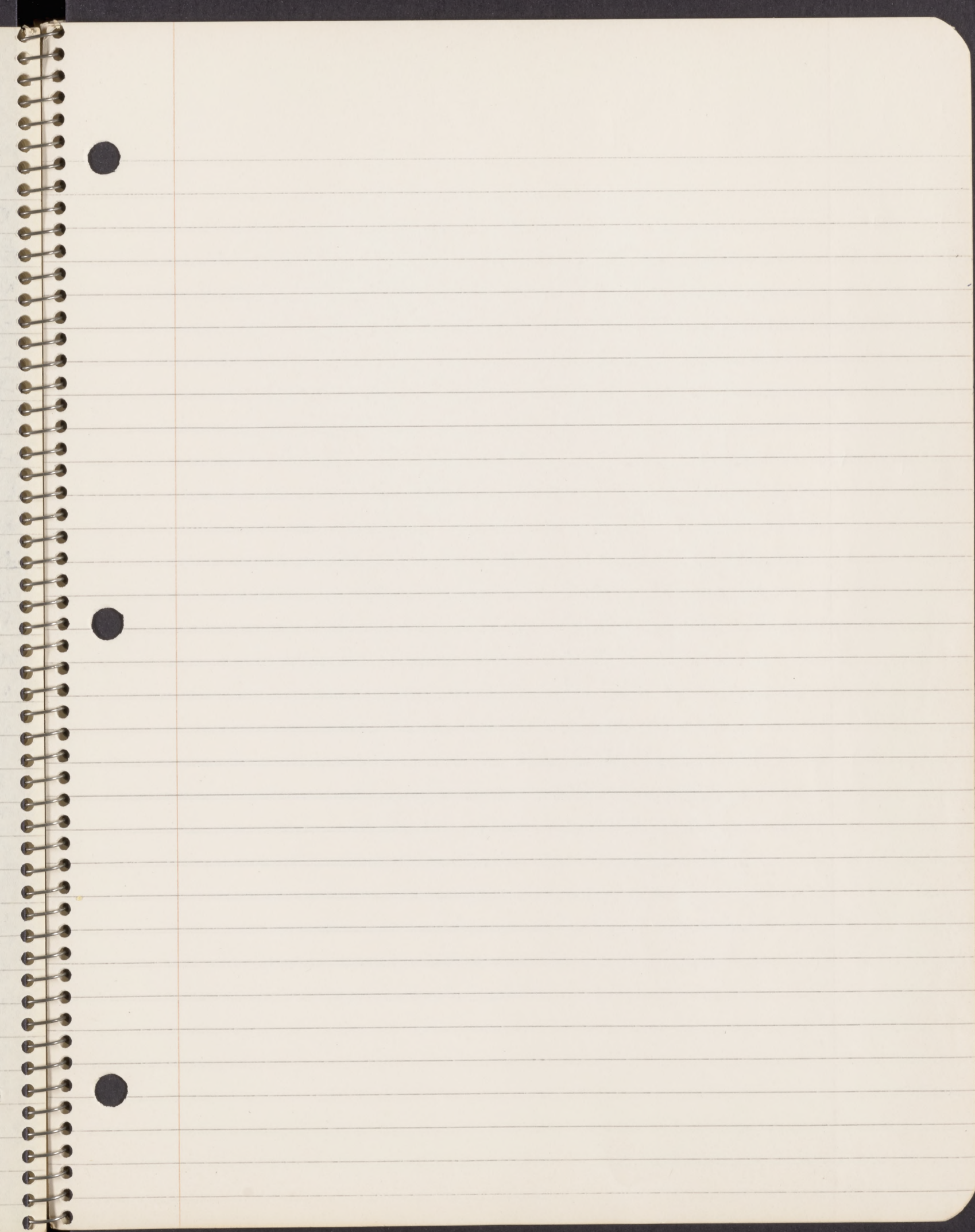
Measurements *Rumex aquaticus*

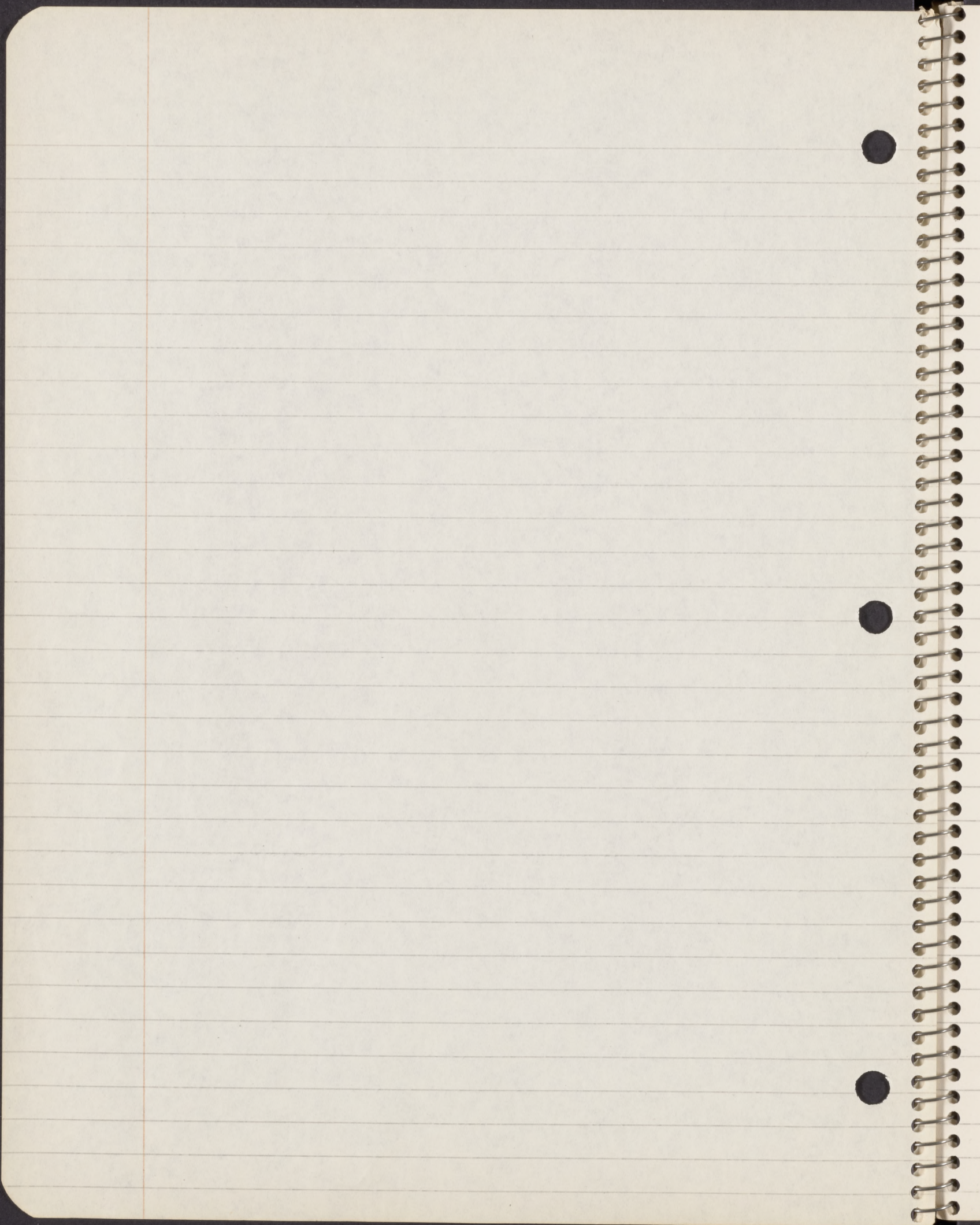
	Br. prox	Depth head	Br. head	Br. tricip	Dist. tricip	Length fast	Depth fast	Length fast	Depth fast	Length fast	Depth fast	Length fast	Depth fast
<i>Rumex</i>	end	head	head	head	head	head	head	head	head	head	head	head	head
Type	(207)	7.2	15.0	50.0	6.3	42.0	2.8	18.6	6.7	—	—	24.0	17.5
L) K 4690	18.6	6.9	—	5.8	—	1.8	—	4.6	2.8	21.5?	—	24.5	16.5
R) K 4688	19.4	6.6	13.9	47.5	5.0	35.9	1.8	12.9	5.7	5.2	2.3	23.8	16.8
L) K 4692	21.1	7.3	15.3	47.4	6.1	39.4	1.9	12.4	6.3	5.5	3.2	24.6	17.8
L) K 4698	20.7	7.2	15.4	46.7	5.6	36.4	2.3	14.9	6.6	5.6	3.0	24.1	17.4
L) K 4691	20.0	7.0	14.7	47.6	5.8	39.4	1.7	11.5	5.4	5.8	2.3	23.3	16.3
R) K 4705	19.4	6.4	13.5	47.4	6.4	47.3	2.2	16.2	6.3?	—	3.0	23.6	16.2?
L) K 4706	20.9	7.3	14.8	44.4	6.2	41.9	1.5	10.1	6.5	6.1	3.0	24.8	17.1
R) F 758	21.3	7.9	15.4	45.3	6.6	42.8	1.8	12.0	5.9	—	2.8	25.8	17.8
R) G 1404	19.8 ap.	7.3 ap.	13.8 ap.	45.3?	5.8 ap.	—	2.1 ap.	—	5.7 ap.	—	2.7 ap.	—	—
L) 3548	20.1	7.5	15.1	44.6	6.5	43.0	2.5	16.5	5.8	6.5?	2.1	25.0	17.7
L) 3521	18.3	6.7	10.7	13.8	48.6	5.6	47.7	1.8	13.0	5.3	—	2.2	15.6
R) 3546	20.4	7.4	14.7	50.3	6.7	42.4	2.3?	15.6	6.5	—	2.8 ap.	25.6	18.0
R) 3546	20.7	7.5	15.1	49.6	6.7	43.7	2.0?	13.2	7.0	—	2.4	24.3	16.4
R) 3546D	20.5	7.4	14.6	50.6	6.1	41.7	3.8	19.1	6.3	—	2.8	25.3	18.2
R) 3521	20.5	7.0	14.8	48.0	6.0	40.5	2.2	14.6	6.0 ap.	5.9	3.4	24.3	16.7
mak		8.1	16.6				2.4	6.2					
		8.4	16.2	51.8									
		8.2	16.7										
Vallecito	—	8.5	16.4	51.2	6.0?	36.5	3.2	19.5	7.1	—	—	28.1?	17.5?
1323/3911													

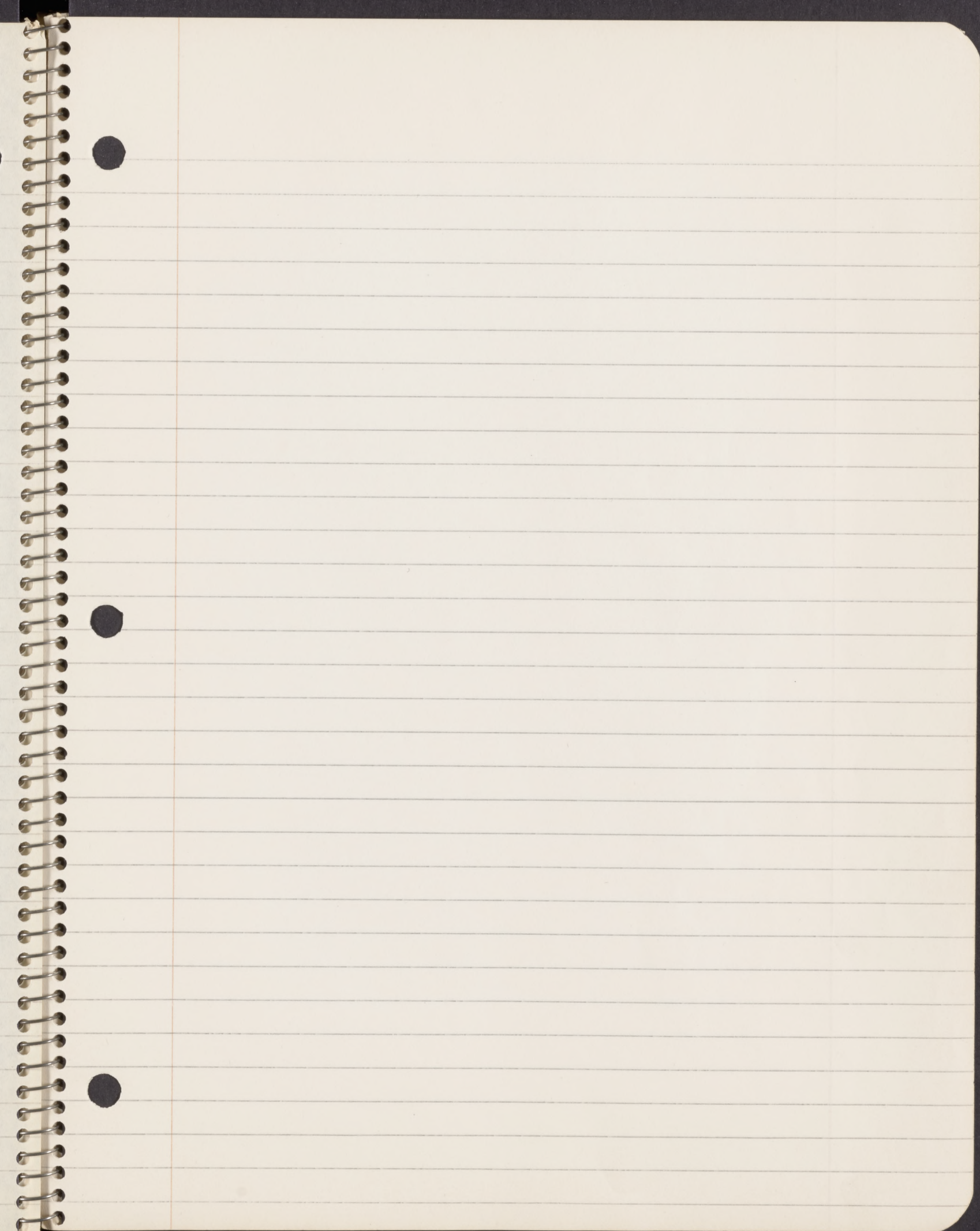
Muscle scar on deltoide crest in Vallecito Rumex set well away from capital shaft ridge (3.7 mm.) + straight (parallel to ridge) not diagonal.

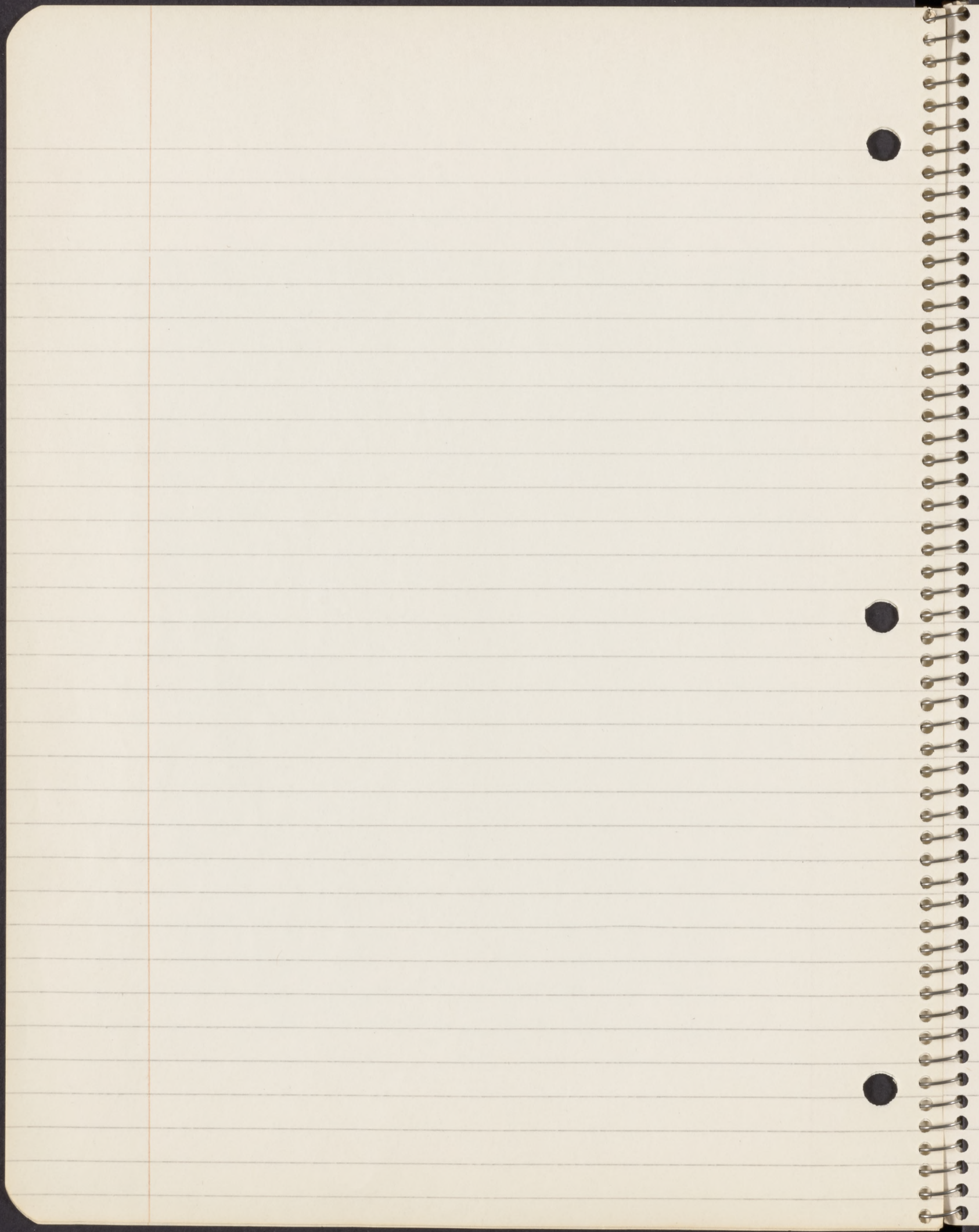
Tadoma 1663	24.5	8.3	16.8	6.5	2.8	5.9	29.7	20.7
1703	23.2	8.2	15.3	6.6	3.2	6.0	26.2	19.7
North 1808	25.0	9.5	18.6	no leaf	—	7.1	30.7	21.5



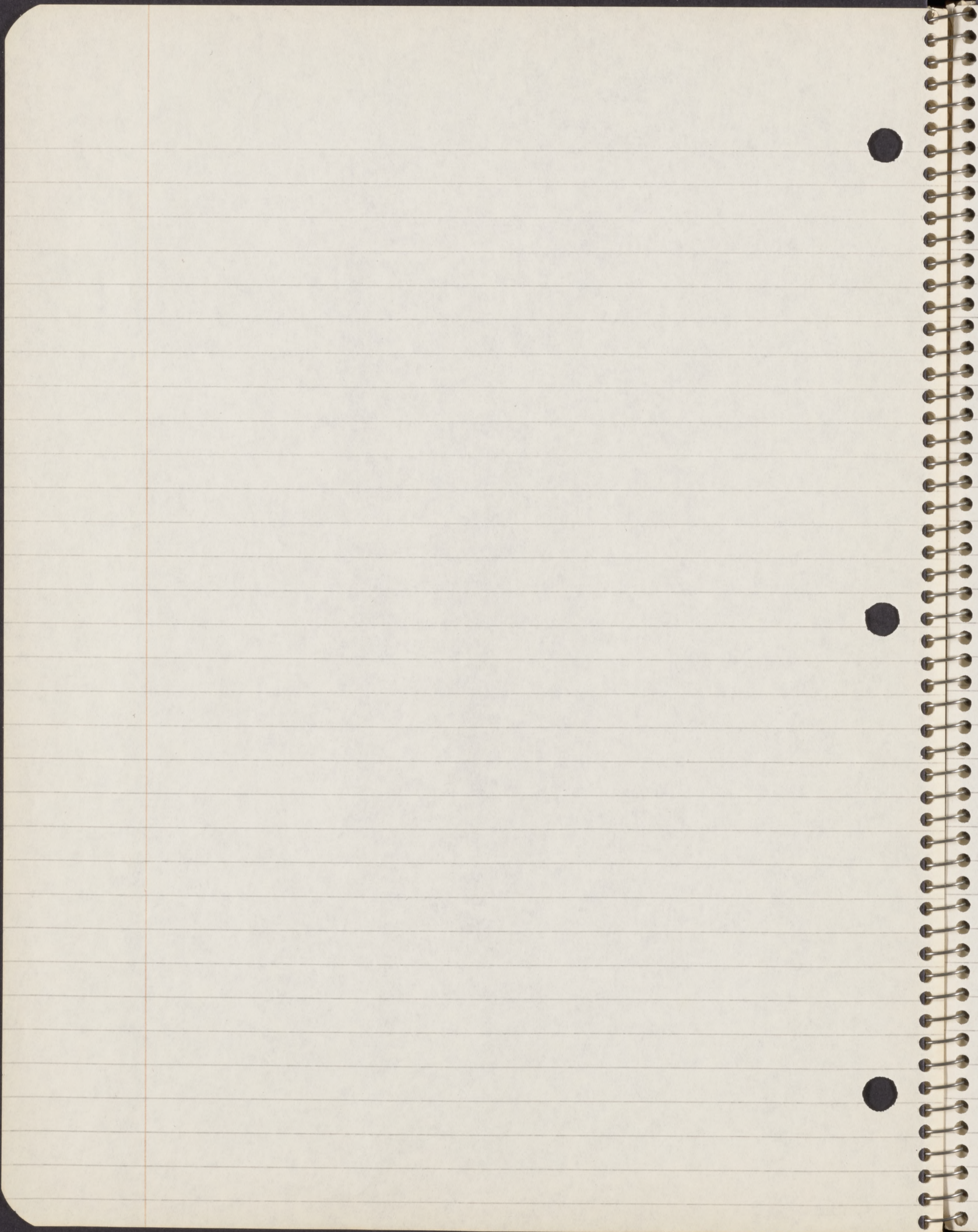


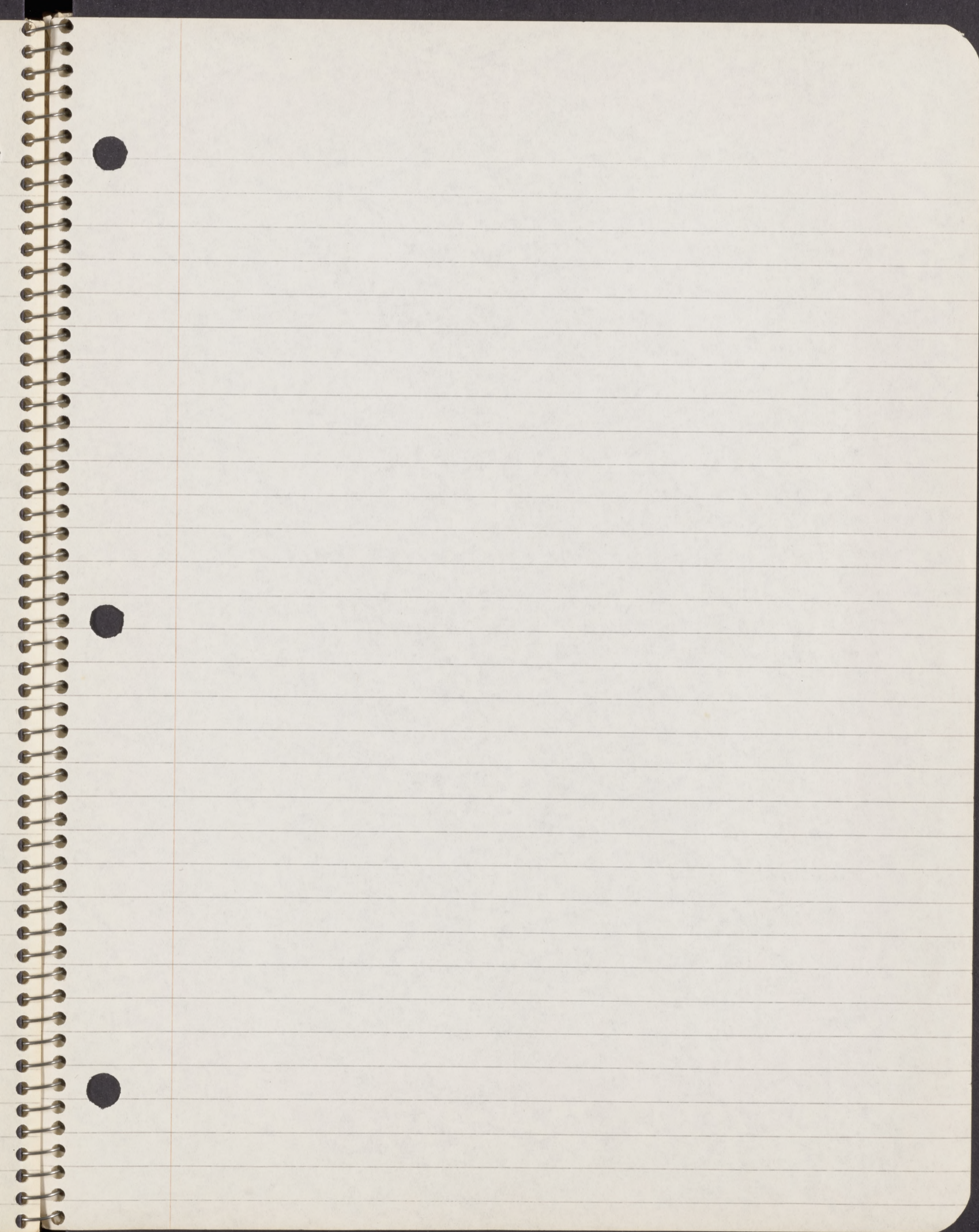


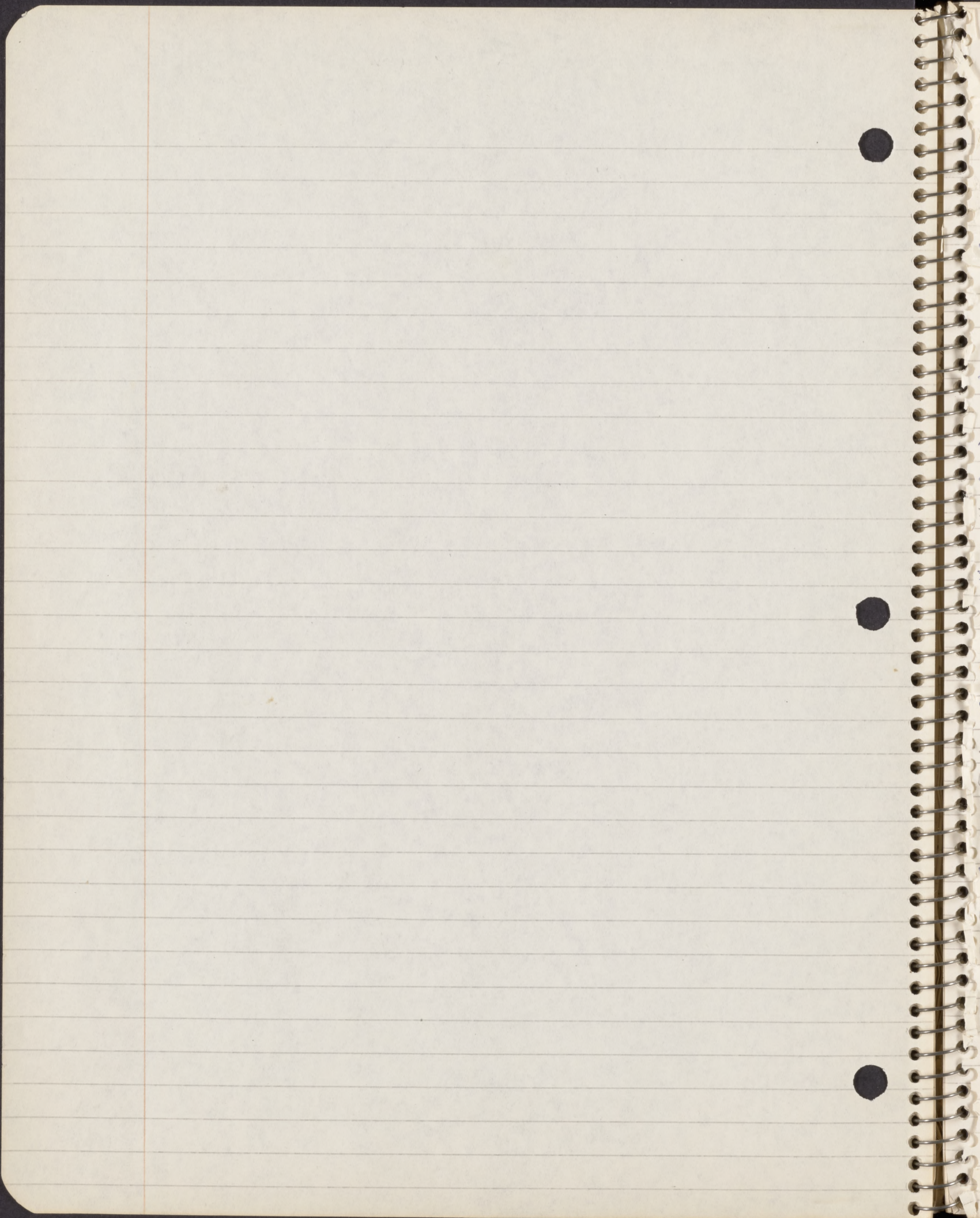










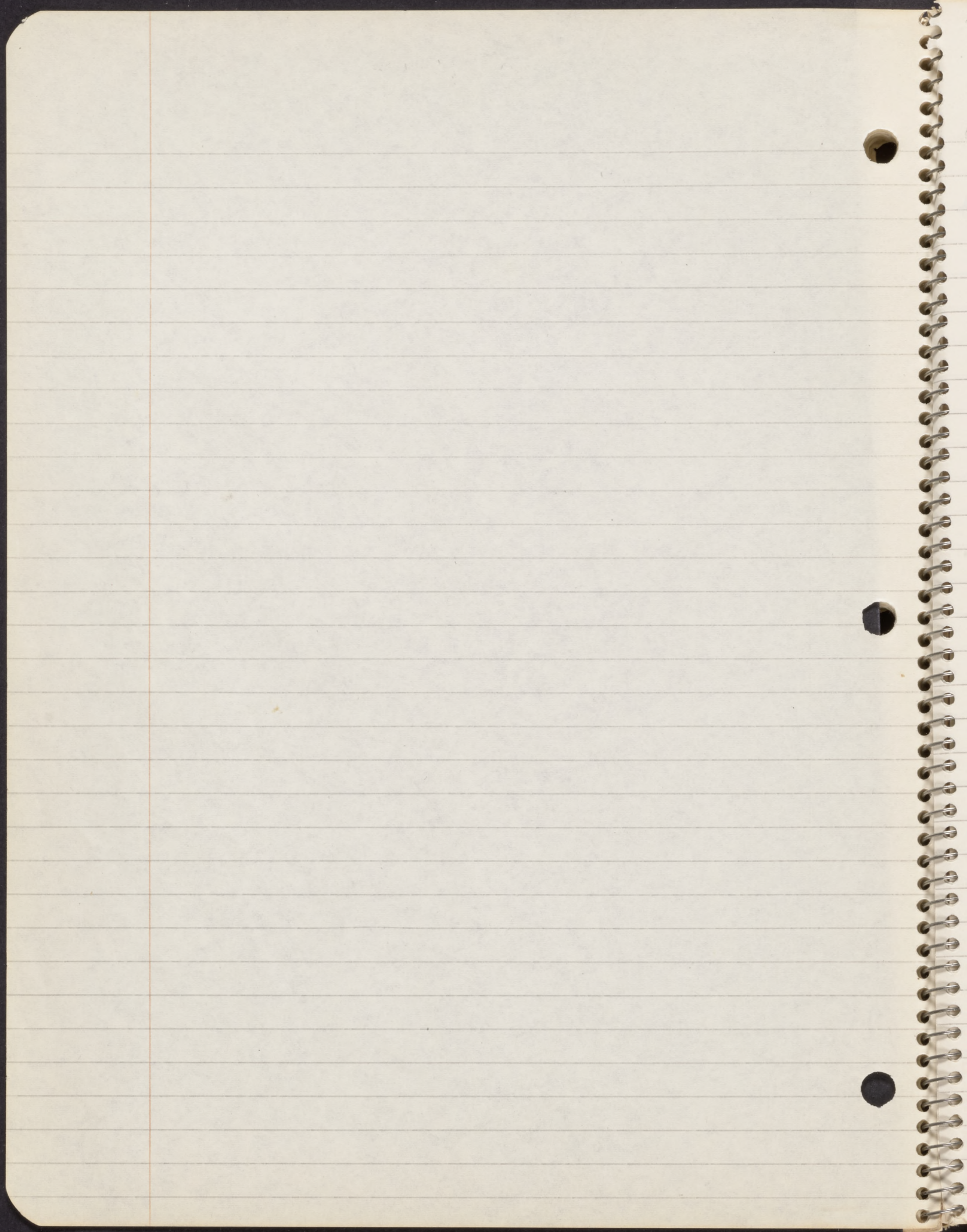


Unrecorded material (birds)

red 2 as of 1974

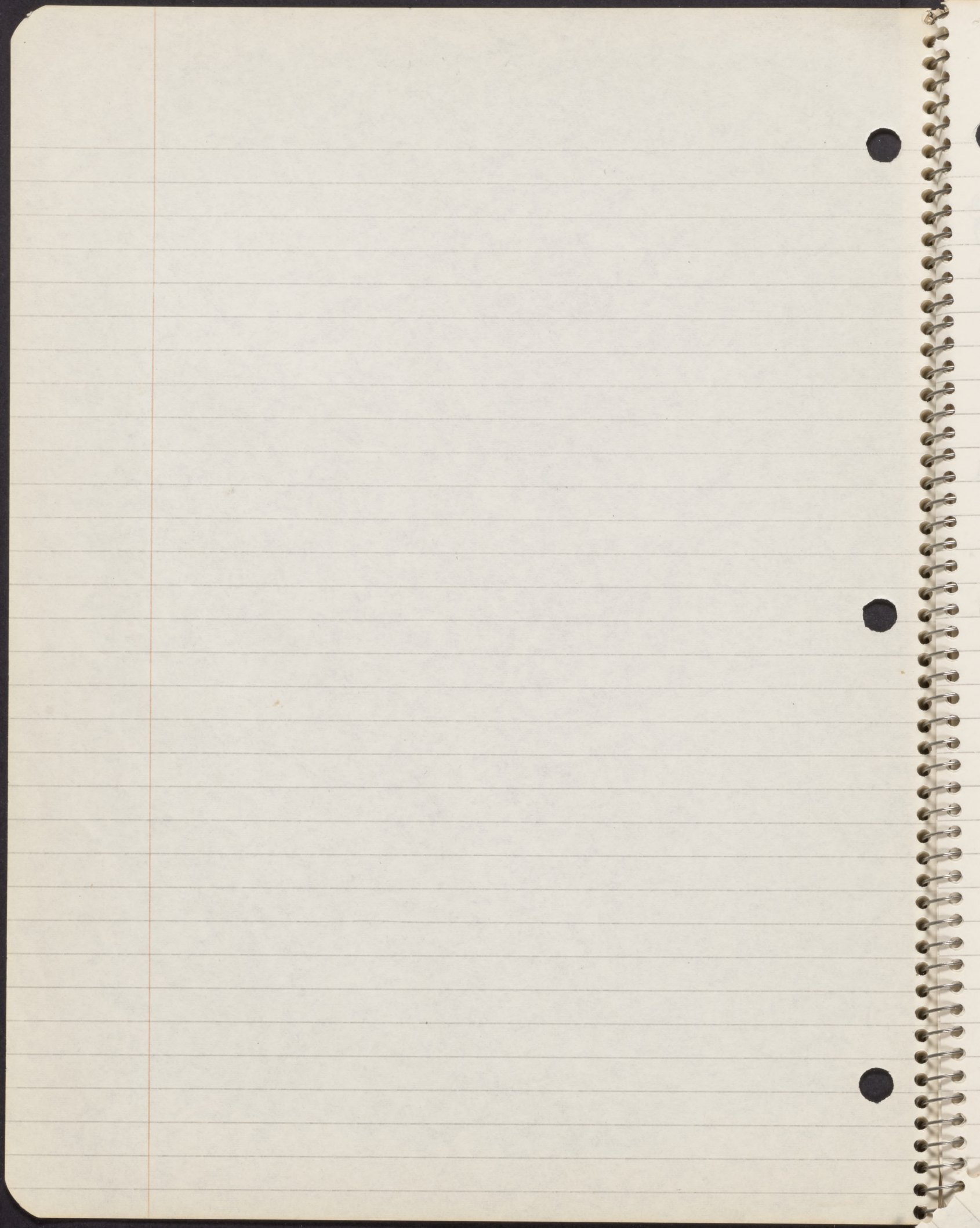
These ^{birds} starred have had published record of other material from calls.

Age	Loc. #	Loc. name	stored where	ident'd	cat'd	# bones
* Pleisto	192	San Josecito Cave,	Gray	in part	NO	many
✓ Pleisto	1289, 1176, 1129, TD501, TD487	Lake Chapala	45E	not recorded	NO ^{yes}	16
Pleisto	1295	Harbor Freeway 112 th St	Gray	1	1 (#3457)	only one wattle
Pleisto		Palmdale, terrace deposit	29A	NO	NO	1
Pleisto		Helendale marsh, S. Bernardino	29R	NO	NO	2
* Pleisto	LAM 2442	Smith Creek Cave	Gray	in part	NO	many
* Pleisto	^{1 Recorded 1970(?)} CIT 106	Santa Rosa Island	Gray	NO	NO ^{yes}	a few
* Pleisto	1066	Newport Bay mesa	Bird case 2	in part	in part	a few
* Pleisto	1042	Qualepa Island	Gray	not recorded ^{in part}	NO ^{yes}	many
* Pleisto		Vallecito (10 or more locs.)	4H	not recorded ^{in part}	3	33
* Pleisto		Dark Canyon Cave, N. Mex.	Gray	not recorded ^{yes}	NO	many
* Pleisto		San Nicolas Id	Bird case 2	NO	yes partly	10
* Pleistocene	LAM 1186 = CIT 505	Mochia, Michoacan, Mexico	43L	not recorded ^{2 in part}	NO ^{2 yes} #3166 and?	2
* Pleistocene?	CIT 308-311	Distrito de Zumpango, Mex.	45L	not recorded	NO ^{yes}	11
* Pleistocene	CIT 268	" " " "	" " " "	not recorded	NO ^{yes}	4
* Pleistocene	CIT 274 and 289	Rincon, Chihuahua, Mex.	41H & 40K	not recorded	NO ^{yes}	4
* Pleistocene	CIT 286	Yepomera, Mexico	40E	not recorded	NO ^{yes}	3
* Pleistocene?	CIT 110?	San Pedro Valley, Ariz.	30H	NO	NO ^{yes}	11
* Pleistocene	CIT 460	Wilkie, Arizona	25G	in part	3 yes 34	34
* Pleistocene	CIT 62	Dry Creek, Oregon	22J	in part	NO ^{yes}	45
* Pleistocene	CIT 118	Snake River, Idaho	26L	2 not recorded ^{yes}	NO ^{yes}	8 locs
* Pleistocene	CIT 63	Thousand Creek, Nevada	24G	1	yes	7
* Pleistocene?	CIT 47	Rome, Oregon	31K	^{comment} NO	NO ^{yes}	1
✓ ?	UC loc 7	Brunneau, Idaho	30M	^{comment} NO	NO ^{yes}	1
○ ?	UC loc 7	Fish Lake Valley	20L	^{comment} NO	NO ^{yes}	1
* Miocene	LAM	Sharktooth Hill, Calif.	11H	not recorded ^{in part}	NO	7?
* Miocene	LAM	San Diego (Cronadel Mar?)	Bird case 2	in part	in part	several
* Miocene	LAM 1247	Sherman Oaks	Gray	yes	2704-2705	2
* Miocene loc?		Ventura County	Gray	yes?	2706	1
* Miocene		Barton	?	?	?	2?



Age	Loc.	Loc name	Stored where	Identified?	Refined?	# bones
Eocene	180	Taft Ranch	2C	Identified?	Refined?	1
Eocene	230	Cody, Wyo.	1C	partly	Refined?	1

Pleist	CIT 184	San Pedro	Gray	Puffins	NO	1
Pleist	CIT 342	Yon Valley, Azules Pk. La	"	Barapavo	3225 ^{yes}	1
Pleist	LAM	Lomita	"	no	no	4?
Pleist	CIT ?	Inyo Co.	"	Phalacrocorax	no	1
Pleist	LAM	San Juan Cn, S.P.	"	Deek & Chondytes	NO	2
Pleist	CIT	Gypsum Cave	"	partly	NO	several
"	"	Lone Lake	30A			



unrecorded
materials

Localities containing avian fossils

These stored
also have representations
in TYPE case

Pleistocene 28 34

Stored ^{Storage} revised 1973

McKittrick - Cal Tech & Lam.		Cases 37A-I, 38A-I
Calquitenia " ✓		Basement
* Rancho La Brea ✓	✓	" and 3rd floor
* Manix Lake ✓	✓	3rd floor Bird Case 2
Schubert Cave ✓	✓	Basement Case I drawers
San Pedro ✓	✓	3rd floor
* Neufel Bay ✓	✓	3rd floor Bird Case 2
✓ Anacapa Id. ✓	✓	3rd floor Gray Case
* Santa Rosa Id. ✓	✓	3rd floor " "
Helendale mail, San Pedro ✓	✓	3rd floor 29 R
Workmen's Alhambra ✓	✓	3rd floor " " ?
La Habra ✓	✓	3rd floor " " ?
Heber freeway ✓	✓	3rd floor " " ?
Stone Man Cave ✓	✓	Basement Case 22, ^{from mail} ^{from bottom} 4th drawer of
* Shelter Cave, N. Mex ✓	✓	3rd floor Bird Case 2
* Conchita Cavern, N. Mex ✓	✓	3rd floor Bird Case 2
✓ Dark Canyon Cave, N. Mex ✓	✓	3rd floor Gray case
Little Hatched Mt. Cave, N. Mex ✓	✓	3rd floor Bird Case 2
* San Nicolas Island ✓	✓	3rd floor Bird Case 2
* Vallerito ✓	✓	3rd floor, Case 7H, drawers
Gypsum Cave, Nev. ✓	✓	3rd floor Gray case
* Smith Creek Cave, Nev. ✓	✓	^{Recorded materials} Basement Case 22, 4th drawer, 5th bottom unrecorded Lam. case. 3rd floor Gray case Recorded mat. Basement, unrecorded 3rd floor Gray case
✓ * San Jacinto Cave, Mex. ✓	✓	
✓ Lake Chapala ✓	✓	3rd floor Case 7H (0745 E)
✓ Tequisquiatic, Zumpango, Mex. ✓	✓	3rd floor " 7H (0745 L)
Lomita, sand pit ✓	✓	3rd floor Gray Case
* Playa del Rey ✓	✓	3rd floor Bird Case 2
* Pozo Creek, Kern Co. ✓	✓	3rd floor type case
Bixby Slough ✓	✓	3rd floor Bird Case 2
Lovelock Cave, Nev. (Rec?) ✓	✓	3rd floor 32 J
Guine andrews apt terrace (Nevada) ✓	✓	3rd floor 29 A
Home, Oregon. Pleist. ✓	✓	3rd floor 31 A
Agate River, Arizona (Rec?) ✓	✓	3rd floor 32 F
Lewis Lake, Oregon ✓	✓	3rd floor 30 A

Pliocene Locs. (avian)

* San Diego		12	see also 26 F 26 H
* Coronado Mar	mus.	✓	3 rd floor Bird case 2
Imperial Valley	✓	✓	3 rd floor Bio Case 2
✓ Rincon, Chihuahua, Mex. C.I.T.		✓	3 rd floor Ted's office
✓ Yefomera, Mex	✓	✓	3 rd floor 7H (5741 H) 540K
San Pedro Valley, Calif.	✓	✓	3 rd floor 7H (5740 E)
✓ Wikieup, Arizona	✓	✓	3 rd floor 30 H
Dry Creek, Oregon	✓	✓	3 rd floor 25 G
Snake River, Idaho	✓	✓	3 rd floor 22 J
Thousand Creek, Nev.	✓	✓	3 rd floor 26 L
✓ Noelia, Michoacan, Mex.	✓	✓	3 rd floor 24 G
Packman's Hill, Santa Barbara	✓	✓	3 rd floor 7H (5743 L)
Brunneau, Idaho (age?)		✓	3 rd floor Bio Case 2
High Lake Valley, Nev? age?	✓	✓	3 rd floor 30 M
		✓	3 rd floor 20 L

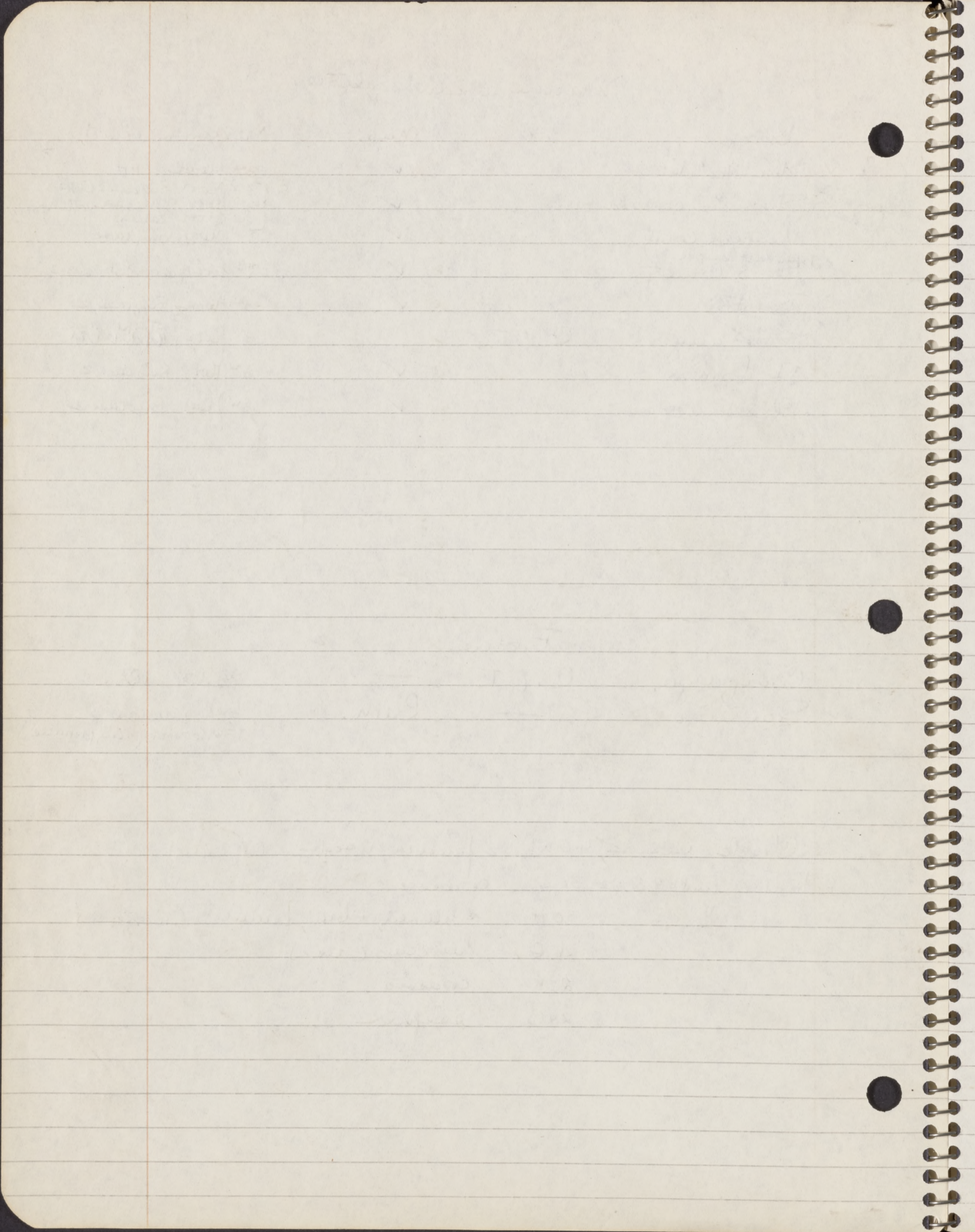
Museum avian localities

9

	Permian	Mus.	Mezzanine exhibit
✓ Sharktooth Hill		✓	3rd floor 11H
* ^{Bakewellia} ^{Osteodonta} Sherman Oaks etc.		✓	{ 3rd floor Bird case 2 (Type) 3rd floor gray case other 3rd floor cases
Ventura County		✓	3rd floor gray case
* ^{Thompson} ^{Canyon} Sta. B. County		✓	3rd floor gray case? Bird case 2?
Boston		✓	3rd floor Bird case 2
* ^{Vasquez} ^{Valley} Canyon C.I.T.			3rd floor, Type case Bird case 2
St. Louis		✓	3rd floor, Bird case 2
El Sereno		✓	3rd floor Bird case 2

	Exhibit		
Cody, Wyo.	C.I.T.	—	3rd floor 10
✓ San Diego	—	Lam.	{ 3rd floor Bird case 2 3rd floor lab (being prepared)

Check cases 40K 2 femora, 1 scap (Mexico)
for added finds 9.31.62 31L coracoid
30H 2 humeri, tibia, femur (Arizona)
26G humerus (see)
25K coracoid
24B scapula



Complete list of Quabernicula Bones

	complete	Right max	dist	comp. Left max	dist
Oak Kittick					
Tarsometatarsi	1	1 (3 inc.)	1	5	4
Humeri	3	2	1	2	3
Carpometacarpi	3	2	—	3	2
Ulnae	3	2	6	1	—
Scapula	3	—	1	1	1
Tibia	3	—	1	1	1
Fibula	3	2	7	—	3
Scapula (1 frag)					
Radius	1	—	—	1	2
Coracoid	2	2 inc		1	1 (with shaft)
Scapula		3			3
Radius					
Coracoid					
Scapula					
Tarsometatarsi	2	3 (with shaft)		3	7 (with shaft)
Humeri	2	2	3 (with shaft)	3	3
Carpometacarpi	8	3	—	10	4
Ulnae	3	3	2 (with shaft)	4	5
Scapula	3			1	1
Tibia		1	6		1
Scapula		4			7
Radius	?				
Coracoid	14	3	2	15	4

Not complete? LB

Tarsometatarsi

Humeri

Carpometacarpi

Ulnae

Scapula

Tibia

Radius

Coracoid

Cranium

Scapula

max 6498 (Pit 16)
complete Pit 758
max 61404
dist 5 shaft F222 Pit 16

complete H2786
Pit 16
max 66780 Pit 36

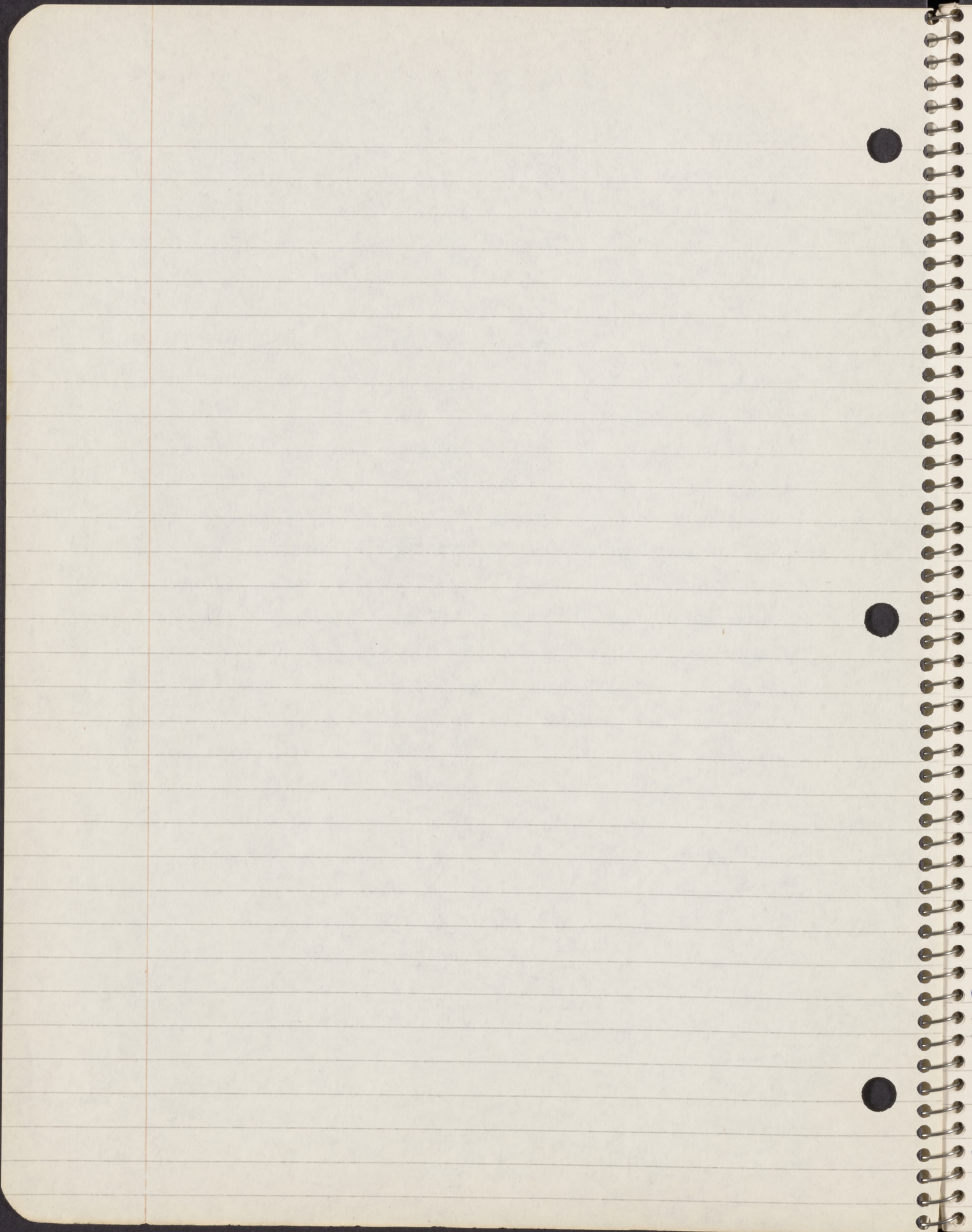
max. comp F5525
No date Pit?

dist F245 left
Pit 16

transverse
dist Right F668
Pit 16

complete H3686, H3687, H3609
Pit 16, Pit 36, Pit 28
Beak H2714, Pit 36
H5628, H56334

Pit 16 max
K2257



Quabernicula characters compared B. nigricans, Anas platyrhynchos & Tadorna

Tarsus	61.6, 60.4, (55.1)	59.7	60.0, 56.8, (63.75)	
dist.	11.4, 11.6, 10.9 ^{dist}	11.8	10.9, 12.0 (11.4 ^{prox})	
Acad Tarsus	(63.25)	58.8	(56.1)	57.0, 59.7
	11.3, 12.2	11.5	11.1	10.0 ^{prox} , 10.6 ^{dist}

McK.

Tadorna #1703

40.3, 13.1

61.1, 12.65

Much more flared distally than Anas

Smallest B. nigricans 56.6 - dist. 12.2 B. min 46.0 (-13.7^{dist})

Size tarsus overlaps B. nigricans & Tadorna ferruginea & Tadorna

Trochlea slightly smaller than nigricans but widespread as in that species. Median trochlea less prominent ant'ly than nig. or Tadorna + ext. troch. more flared than Tadorna but more as in nigricans. Chief claws lie at prox end below & adjacent to hypotarsus

① Internal side of shaft forms faint ridge beside the hypotarsus, the hypotarsus being thus slightly just medially. Internal ridge of hypotarsus short & squared off distally with shaft immediately distal there to slightly raised medial to ant. ridge - like posterior border of int. surface of shaft. (3) Calcaneal ridge ^{approx.} with depression ^{longitudinal} on shaft running distally from below #4 or space bet 3 & 4

④ Ext. to hypotarsus but medial to true ext. surface of shaft a low ridge parallel 4th calcaneal ridge from ~~prox~~ just below prox. surface ^{approx.} to level of distal extent of calcaneal ridge #1

Anas abrupt distal edge to calc. ridge less than B. nigricans

Char. #1 differs from B. nigricans & Anas & one sp. of Tadorna, but occurs in Tadorna ferruginea; ② A short squared ridge #1 occurs in B. nigricans, Anas & Deudorcygnus (note this varies in fossil, some more abrupt than others - Tadorna near B. can. longer & less abrupt).

ridge in Anas less distal extent; more of a pimple in Tadorna about middle of calc. #4; faint, close to calc. & above in nig.; B. can. more closed

③ All have four ridges, marked depression below 4 (or space bet 3 & 4) in Tadorna & Tadorna but not in T. ferruginea, also found in Deudorcygnus; B. nig. & B. can. smoothly slant proximad from int to ext side (rather more convex in can., flatter in nig.).

② raised area below calc. ridge #1 in both Tadorna's, absent in ferruginea (where ext. surf. of shaft is ~~not~~ on a line with it) set in slightly medial in T. tadornae, ^{in Deudorcygnus} when ext. edge of shaft is continuous with calc. ridge. No raised area in B. nig. or B. can.

Quabernacula & Rec. forms compared.

Ceraoid

Max. 43.3 49.8 51.4

Tad. ^{peruvianum} 54.6
" ^{tadoma} 47.5

Recent. B. nig. 44.3 49.6 (?) B. cau. 48.8 - 51.8

Dead, 41.5 49.8

Other P.H.B. 47.9 48.3

Characters. Distal end internal point thickened more than in Anas, but less abruptly curved dorsally than in B. nig. or B. cau. or even *Penduloceryx*. Ratio of lit. from pterocoe to head rel. to total length greater than Anas less than *Gormi* or B. cau. quite close to T. tadoma marked ^{excavation} below brachial prominence of fucular facet with upermetrii foramina beneath facet (more dorsally localized excav. than in B. nig. or B. cau. ^{or *Penduloceryx*}, similar to both Tadoma; Anas similar in that foramina are lacking & excav. is dorsal but excav. is less deep & whole bone slopes more abruptly toward ext. side so that less surface faces internally. Fucular facet notched on distal margin as in Tadoma & some ducks. Pterocoeoid runs gradually from shaft ^{lower} rather broader angle with shaft than in B. cau. ~~not~~, smoother take off than Tadoma; less curved internally than either Branta, more ducklike. Fucular facet distinct from *Penduloceryx* in which it is very deep & round distally.

Quadrangular of B. nig. B. caurina, Tadorna, Anas
 scapula - acromion lighter & more pointed than in Anas
 coracoid articulation more bulbous, very much like
 Tadorna; B. nig. & B. cau. have extra flange on
 acromion making it broader dorsomedially. Coracoid
 artic. similar to Anas but Branta has
 foramen dorsal process which Anas & Tadorna don't have. Anas tends to have the distal
 ventral broadening like Branta, whereas Anas
 has dominant high ventral point very little dorsal - True
also of both Tadornas, Acromion lower in Dendrocygna, scap.
 artic. bulbous, however & no foramen.

Carpometacarpus -

Dist. K. 56.0 - 60.5; depth from M1 13.1 - 16.3 (approx. frag.)

Acad. 51.0 - 63.4; 12.2 - 16.5

Oreodytes 62.0 - 62.8 16.2

Ext. crest distally ends slightly medial to prox. ends M3 than B. nig. but less so than Anas
 Very ~~long~~ slender extended M. process. Tip clearly set off from base as
 a slender, extended point - longer & more slender than B., Anas, & Tadorna
 Space between trochlea & tip (seen ext.) forms deeper concavity - (Chas
 in Branta nigricans (which is nearly straight; Tip may bear exostosis.
 Marked depression at junction of M. process with balance of carpal end
 where bone then rises from uneven longitudinal ridge but, the 2 lig. attachments
 This area is nearly flat in Branta, slightly raised in Tadorna, more
 raised in Anas but lig. attachments are arranged differently. Lower lig. attach
 large & distal margin extended below level of dist. edge of ext. crest of carpal trochlea
 The carpometacarpus (3546 D nearly complete) appears slightly stouter shaft,
 longer of ext. crest of trochlea & dist. lig. artic. set more proximally. Prox. foramen
 about ~~as~~ B. nig. but bone narrower at base of trochlea to M1 (very ^{Tadorna-like} Anas-like)
 Dendrocygna very long slender through foramen. Dist. Crest of troch ends about
 level of dist. edge M1 as in Tadorna (Anas more prox.). Distal foramen of
 moderate ht. (about as B. cau.); Anas higher, B. nig. lower
 & Tadorna

Quabercula study

Ulna - quite short - overlaps A. platy σ in length (at min.) and B. μ at max. Distally internal condyle is thrust internally more abruptly ^{partially} from shaft than in Branta, more like Anas. Ridge (probably) extends up shaft from int. cond. proceeds proximally $\frac{1}{2}$ distance than in Anas. Two muscle scars externally (dist.), one oblique horizontal extending above external condyle almost to middle of shaft posteriorly, the other running practically longitud. on ext. side of shaft touches distal tip of the σ & proceeds distally almost to touch prox tip of fibular condyle. In Anas both scars are on ext side of shaft (the more prox. extending onto post surface ~~at a~~ slightly; both scars are narrow compared with

Posteriorly those of Quabercula. Quabercula is more like ~~Branta~~ Branta prox. one as is true also of Neochen & Tadorna (663 ferruginea) have shaft T. tadorna more ducklike in narrower, but extent goes like int. trochanter spec. lat one. Prox. trochanter is markedly undercut & projects partly ~~at~~ ^{at posteriormost point} just below prox rim. This char. is found OK in Neochen in Neochen & Tadorna & to lesser extent B. μ & some ^{can.}

Muscle scar on ant. surface medially below head, raised & prominent. Not so in Anas

~~Ant. intermuscular line~~, Can't measure. Fossil like seem identical to asphalt bones but details may not be discernible owing to breakage around edges

Quabuncula study - Tibiotarsus

No complete bones - estimate length of $11 \rightarrow 100.7$ mm.; some mure, some less
 longest tibia 82.6; tarsus 98.1

MCK, est. 83.8 (maybe Anas)

definite
 rise from
 bridge
 int. as
 well as
 ext.

Distally resembles Branta in rel. breadth & spread but bridge more deeply inset, ^① int. condyle (partly) curves to connect to shaft below bridge (condyles stops short at shaft in Branta, this connection is present in Dendrocygna & Neochen & Tadorna).

Proximally ① External epicondyle pointed & downcurved as in Anas & Chelidon; Branta has blunt tip. ② Intermuscular line anteriorly, ^{straight} connects with distal edge of inner epicondyle medial to ext. lig. attachment ^{Branta} ~~as in Branta~~ very similar to Tadorna Tadorna, unlike Anas in which line ^{signifying ext. lig.} touches by itself; similar to Branta in position relative to lig. attachment, but line is straighter. Wolfenden notes (p. 74) that this char. of sep. of intermuscular line from lig. attach. is found in the ^{majority of} forms of anserine birds, but ligament attachment very prominent & more ant. in position than in Branta.

Distally (see ^① above for shape of int. cond. ant'ly) lig. attachment on ^{surface of int.} internal condyle more prox. than in Anas (was as in Branta, but very down more nearly central prox-distally with respect to condyle itself. (near ant. margin in Branta) more like Tadorna, very long, well marked tendinous groove ^{mainly on ant. surface} - pronounced at dist. surface Area above ext. condyle thicker ^{than in Anas}, ~~less pronounced~~ ^{more} ~~less abruptly~~ set ^{prominent} ~~posteriorly~~ ^{straight} line runs up shaft on medial side of the tendinous groove marking medial edge of groove

int. condyle more ^{widely} ~~abruptly~~ thrust int'ly from shaft than Anas ~~with~~ but more on level distally with ext. cond. than in Anas ^{more like Tadorna} ~~in Anas~~ ^{lip} lip prominence at edge of int. cond. in Branta ~~is~~ ^{more noticeable} ~~on this respect~~ ^{more like Tadorna}

more
 Branta
 like
 even than
 Tadorna
 like
 except for
 more
 on this respect

Cuebiracula strick

White

Pox^{ly} the ulna has a prominent papilla immediately ^{& slightly medially} below the tip of the ext. facet that bends down the shaft from the ext. cotyla, this is found in Branta & less pronounced in Tadorna. The tip of the facet proceeds further distally & tips more medially than in Branta, my features of Anas, Tadorna & Dendrocygna

Bone is longer and slender than *Quas.* Shorter than *B. nigrus*.

Distal end: external condyle evenly rounded, relatively high compared to Branta, Branta prox. condyle ~~is the~~ the continuation of the curve as it joins the shaft of the humerus.

Process (palmer, not dist. end) joins shaft near abrupt of

fin gracile than oregonensis & tip is more pointed

† points more laterally less distad. Prox. end of Oregon

bones have exostosis; the right is a heavier bone than left

as probably not mates. The distal right is also not mates

to the complete left as enuf of max is present to show that

It is considerably longer. Chas. of ext. facet below
edyla dos guies by exostosis in Argonensis. General contours
resemble gracilesta.

Muscle scar int. juv. below olecranon very deep with marked rim behind it in line with olecranon which gives straight line to contour as viewed unusually near in Branta (more like Cnast. Tidemia) Branta quite rounded

~~gracileuta
max. l. 1.5 Anas
reg. max
l. 1.5 Breuta~~

✓ Dendrocygna

Blue 2 sps d

Tadoma

differs in this

ferrous mal-
prone; ~~the~~ with

both were so then

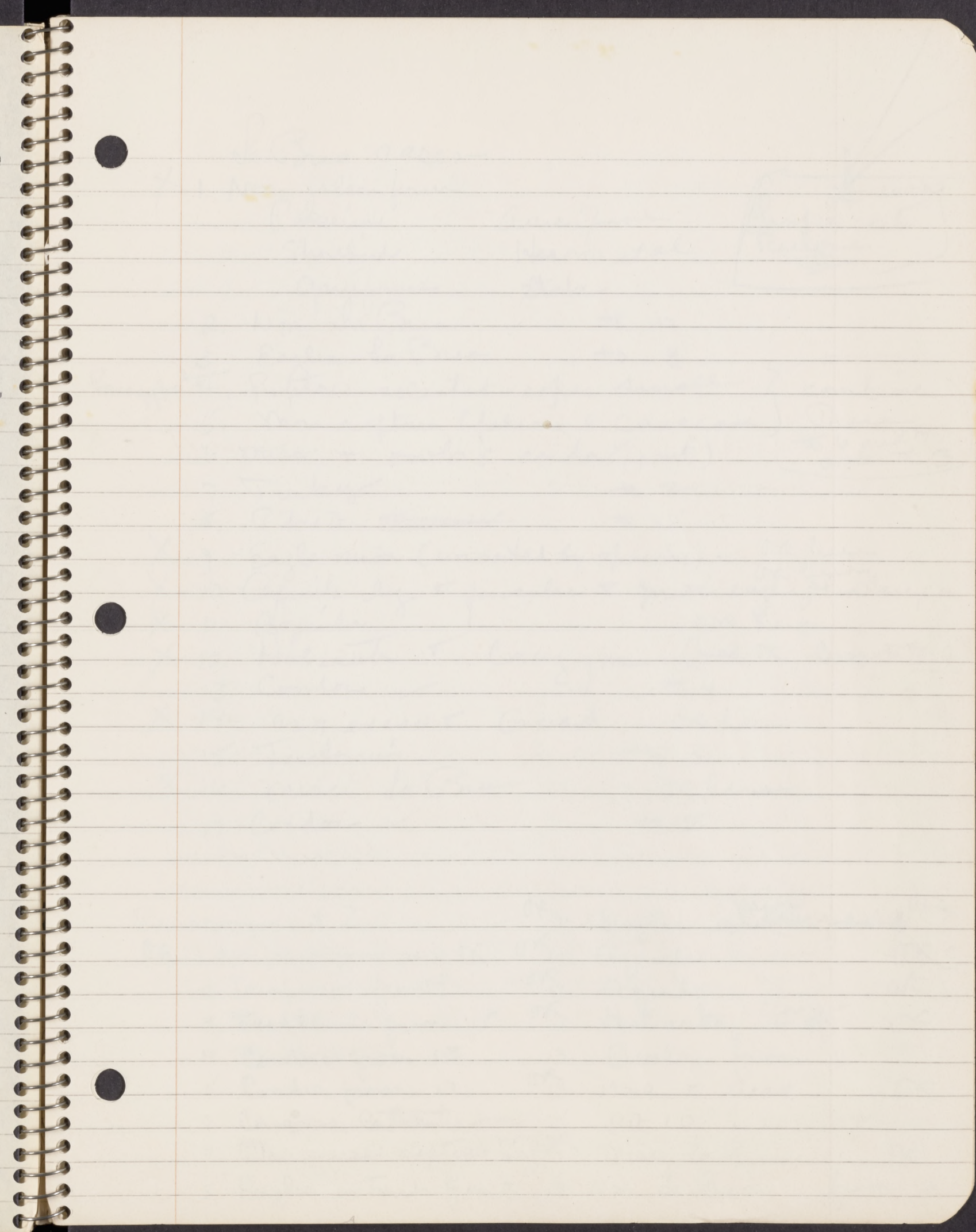
Oregon

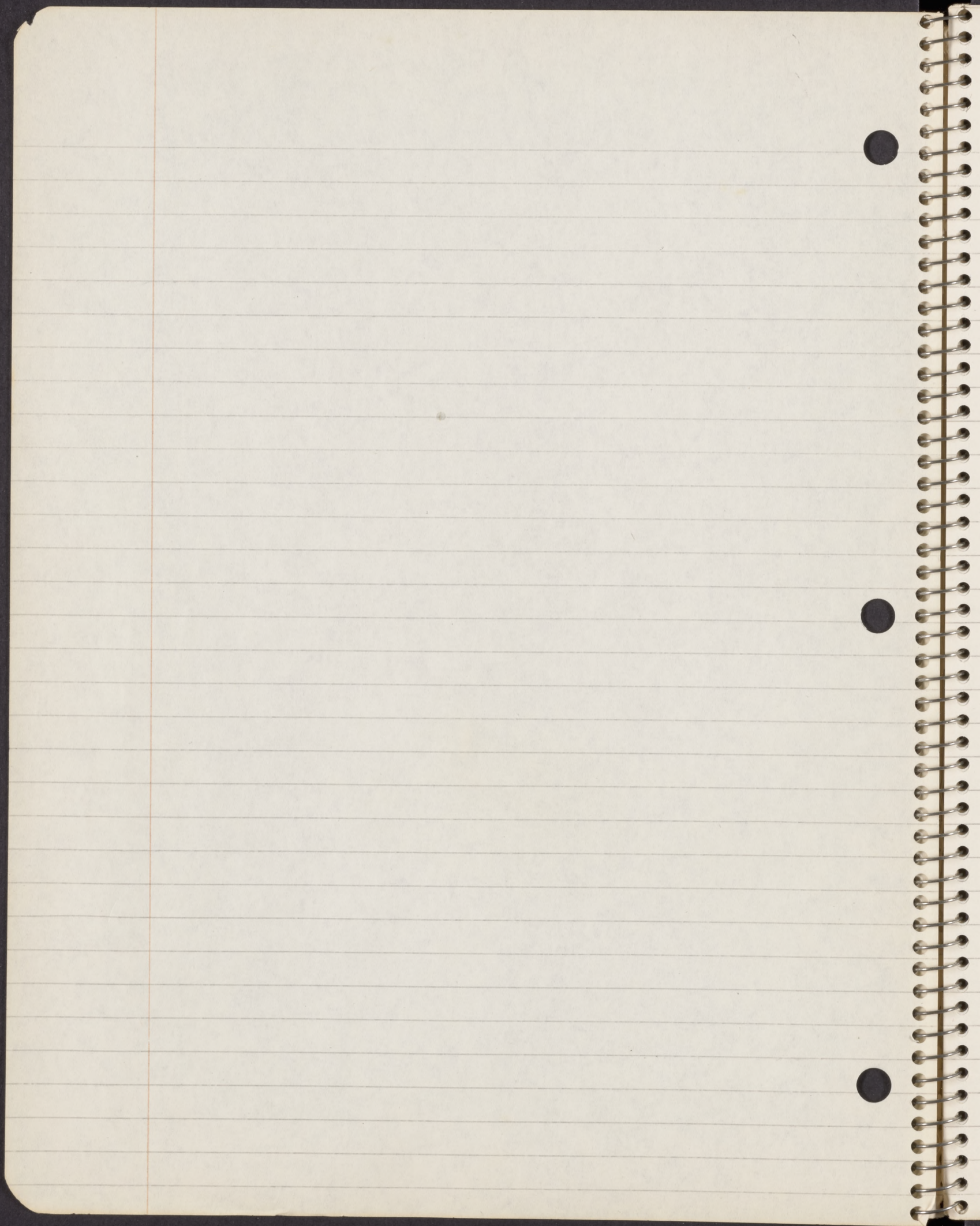
Right part $\frac{3}{4}$

dist 9 4
10

Lab 5 complete

very complex





La Brea cases

X 1 Non-falconiform

Passerine

Shorebird

Quifones

Amoenform

Heron's et al

Stork

~~remains~~
Lamp for casts
Rebone

2. Non La Brea

to 17

3 Eagles La Brea

to 8

Brachyph

4. Raptors selected - espec small

combine

5. More raptors (falcon & Caracara)

There
to 6 and 17
owls to 13

6 misc. & owls & condor (part)

7 Turkey

to 2

8 PIT 10

to 15

X

9 Eagle misc (unsorted by species) - OK here

X

10 Aquila leg & fucular & misc eagle phalarope

X

11 Aquila

OK here

X

12 Haliaetus & Caragyps (Hal. OK, Caragyps to 6)

13 Condor

to 4

X

14 1929 excav & Cecad OK here

15 Teutonus

to 3

X

16 misc, La Brea

OK here

17 Condor

to 5

Rearrangement ?

OK

1 Nonfalconiform as is OK

OK 9

Eagles misc

OK 10

Aquila

OK 5

2 Paraphavo from 7

OK 11

Aquila

OK 5

3 Teutonus from 15

OK 12

Haliaetus

OK

4 Condors from 13

13

Owls

from 6

5 Condor from 17

OK 14

1929 & Cecad

OK

6 Caragyps, Bathantes from 15

OK 15

PIT 10

from 8

7 Miscellaneous raptors from 4 & 5

OK 16

Misc. La Brea

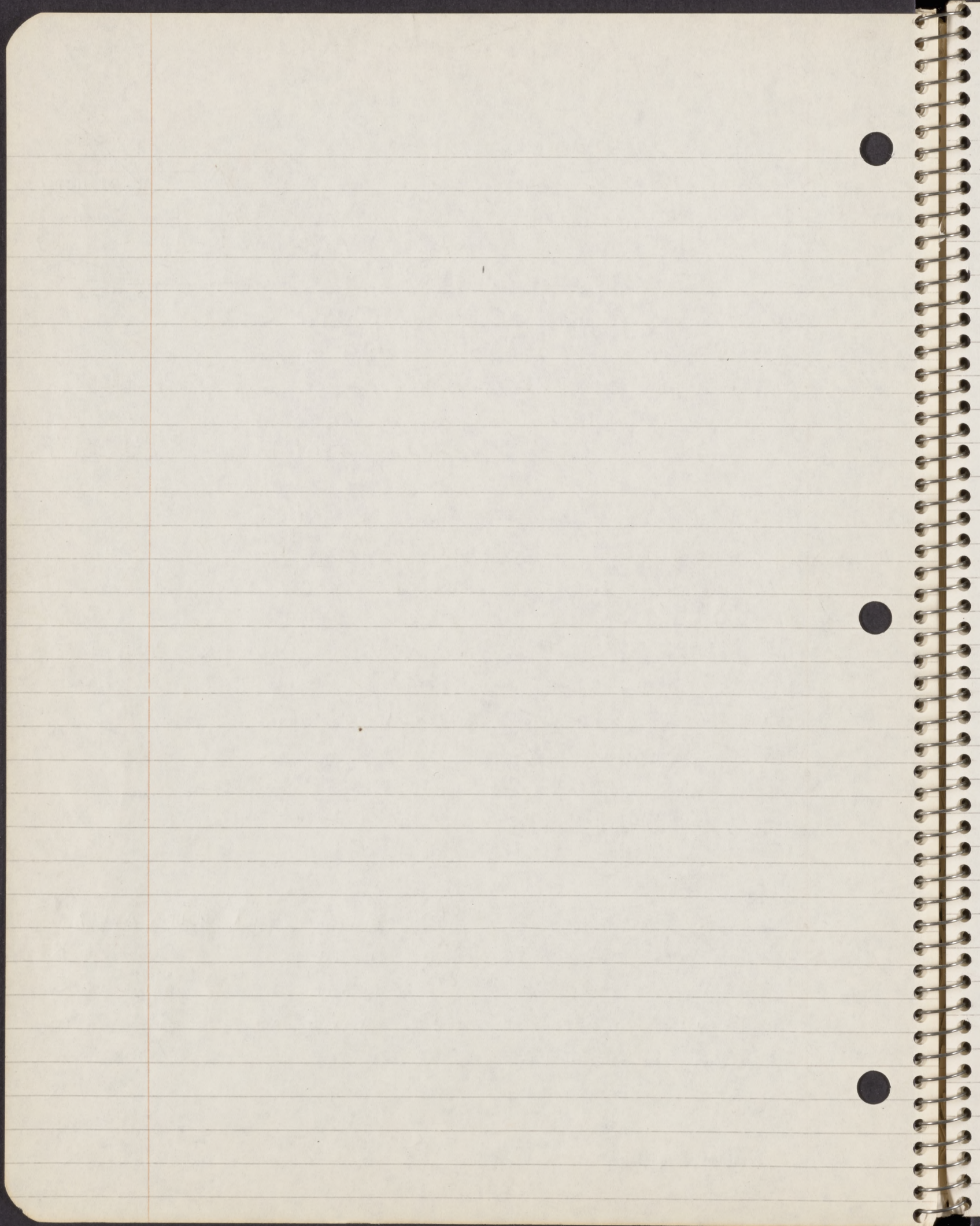
OK

8 Eagles ex Fush from 3

17

Non La Brea

from 2



Cretaceous

Loc. 1963, Buffalo Gap, So. Dakota case 17 (temp.)

Eocene

Cover of *Hyperomys*
#s 9726-9730. *pusia*, vito
habilla

+2 7.23.63?

la. 230, Cody Wyo.

was at home

III - 8

#4652 distal end tibia Parapsis (?)

Winton Loc. 180, Tafo Ranch (Unit ^{Yosemite Co.}) Calif. III-14

No. # 5 capula (tiny) bud?

Vinton loc, 1877 Bowyer loc. San Diego Caly III-16

A2851 *Flutansu, Quifomes*

Winter 1723 Poncey Cr. " " "
? can't find $\rightarrow$ 249 " " " " " "

Type case $\leftarrow \{$

6171 *Protobius californicus* *humeus* n. sp. oval

Oligocene

Whitney? RM 1467 Wounded Knee Area So Dak

тепловы
IV-20

no # [gronae-litogalli] om (small)
humerus (2 pes) & ungual

Miocene

(Shapiro from pupae of *S. A. Sch. Minis* 2 full grown? next to
6239 + 6240 RM. Id. # 11 tarsus

Orikarean
 Wrayton/Mib

Loc.	1821	Sharp's fin, So. Dak.	V-14
	1982	" " " "	V-14

#9357 hawk distentia

 $\# 938^{\text{th}}$ grass $\geq$ max .. hence

✓ ✓ — 'ood + ofanga Rd. Vent. Rod, Calif. V. 24

2703 slab-shamwater
(mtr. ferns)

✓ ✓ — Ventura Co., Balcon Canyon (2 domes) V-24

2706 2 slabs streamwater
same indiv. —

V ✓ - la. 1875' Capistrano fm., Calif. (Orange Co.), V-24

6135' Shearwater on 2 slabs

✓ ✓ loc 1267 Sepulveda Ventura Blvd. La Cien. ✓ v. 24

(2207) *Osteodontomys* ^{alt} *alticola*

2705' frag. Shearwater in matrix

2704 sulawilletti pag indal

✓ - #1894 A' Beverly Glen Canyon, Shamon Mts, Salakij' r, 24

#7320 bird pelvis on slab

✓ - # 7. Under Mulholland out on S.D. fairly (Black mtn) 11-24

2. Bird trig wing bones.

✓ ✓ - 1975 2 Eucino, 45 mi so. Vent. firs

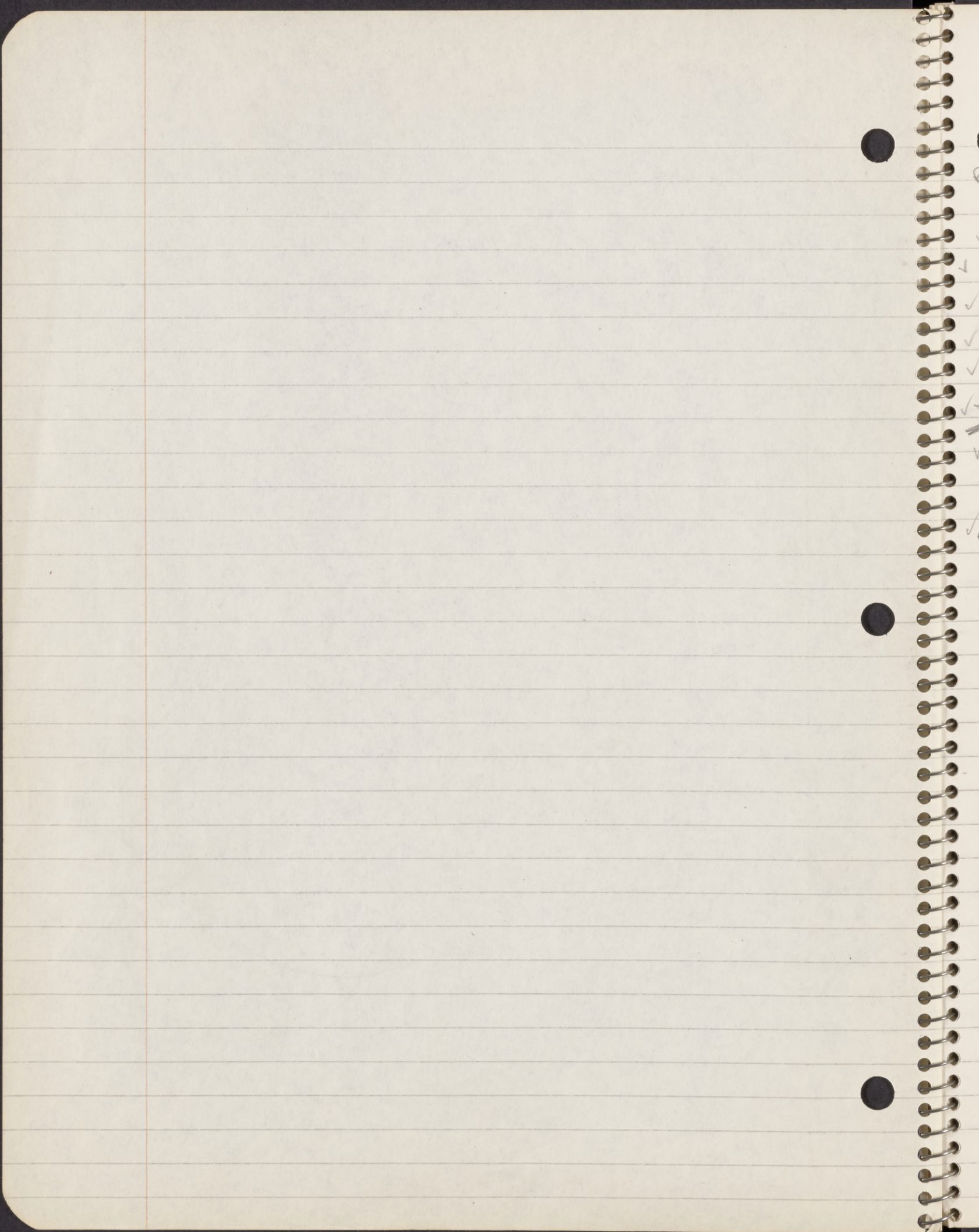
V-24 5001 Solid on 2 large slabs

✓ Sharktooth hill locs.

V. 24 { Albatross: humerus^(2?), ulna^(3?) tarsus

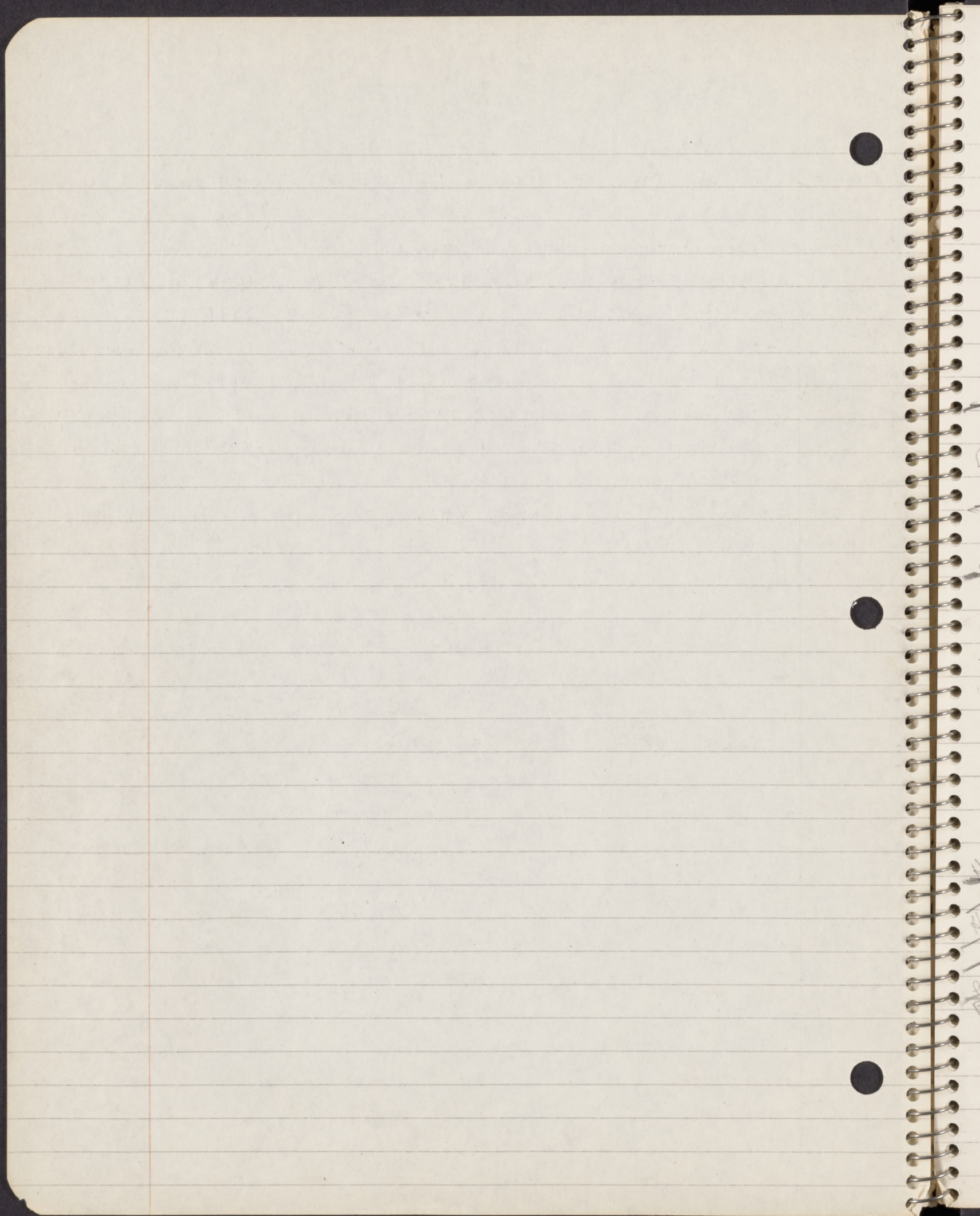
{Solid; tarsi (3.)}

Misc. humus (2) sacum, carbon,
ferm (2) + faps.



Miocene, cont'd

- Barstow loc. 44 Lucker Creek, Malheur Co, Oregon VI-8 { 5341 femur (dist.) sp.?
5342 ? Buell ??
- V-24? ✓ loc. 1229 Whitsett Laurel Canyon - Vent. Blvd. Vaco. 1
" " " Coldwater " Studio City Type Case 2532 humerus (Subj?)
- ✓ V-24? ✓ ? - 1 Pt. Lermier, San Pedro ✓ 2674 part skull, on slab ^{Subj. T} pubis & foot bones
- ✓ V-24? ✓ 3 El Sereno n. Round Drive - Chute St. ✓ 2891 Pelletas? impression
- ✓ Mahogany Creek loc. 1127 Tefuoguet Canyon, Sta Barbara Co. Type Case 2533 Palaeozula skeleton ^{humerus}
- ✓ Tule Canyon loc. 201 Vasquez Canyon, Calif. Type Case 2604 Palaeoscinis ^{2 skulls} turdinator ^{Type}
- ✓ ~~Chico Canyon~~ loc. 1018 Lompoc, California Mezzanin ¹ exhibit 1396 Mioherax ¹ ~~stehi~~ ¹ Type
880 headless skull Puffins ¹ ~~stehi~~ ¹ on slab
- Barstow loc. 1090 Barstow, Calif. 1949 VII-23 } ident. by Lloyd Miller
loc 1091 " " " " } 10
loc. " " " " }



Pliocene

Mid Plio
S.D. fm.

San Diego, Calif

Locs. 1075, 1080, 1081 etc

VIII-24 (4 drawers)

Mauacalla auduboni

Type Case

Tyrant-auratus 2122 Tyrant-auratus 2127
Puffinus Laysanensis, Phalaropus lobatus
Type 462117 Type 462118
Miosula recentior, Berytus
Type 462117 Type 462118
Colymbus subparvus, Oryzopsis

Low Plio
Repetto fm.

1067 Corona del Mar (Newport), Calif.

VIII-24

Mauacalla + mios

1067

Orange Co.

Type Case

Type 462117
Puffinus felthami

Low Plio Repetto fm.
Clarendonian

Ricardo, Calif. Clarendonian

(Charles Cole, Sept 1962 C208)

IX-11

no# small Galliniformes
prox + dist end humerus

Low Plio: Emerald Lake fm. Clarendonian

Loc 3 Fish Lake Valley, Nevada

IX-14

no# passerine?
+ tiny dist end humerus

Loc 62 Rome, Oregon, Malheur Co.

IX-19

ident. by Miller, Corda 46;
#d and some not recorded
total 46 + fragments
(+ tarsometatarsus in Berytus)

Loc 63 Thousand Creek, Nevada

IX-22

#d 9 bones (tibiae, scapulae, radius)

Loc 460 Wikieup, Arizona, Blauca

X-16

#d 28-30 bones nos. 3964-3998

Loc 110 San Pedro Valley, Ariz, Blauca

X-16

#d 17 (loc #?) 1 definite loc 110

Loc 113 Cozo Mts, Inyo Co, Calif, Blauca

X-18

no# 5 eagle phalaropus and Corallorhiza

Loc 118 Snake River, Idaho

X-20

2808 Corallorhiza humilis (with phalaropus)

Loc 122 Barbours Ranch, east Brunswick, Idaho

X-20

#d 4 recorded by Miller 46
4 unrec'd unident.

Loc 1842 So. of Brunswick, Idaho (Cawley 1963)

X-20

no# prox tarsus + frag. rad.

Loc 3 Shoofly Creek, " " from U. Calif.

X-20

#d 471 tarsus (prox) large phalaropus

Loc 49 Pozo Creek, Kern County, Calif.

Type Case

#d 454 distal end humerus Type Sacrocaudale hernandez

Loc 274 + 289 Rincon, Mexico

Assoc. Office

#d 19 bones

Loc 289 " "

Type Case

different from Phoenicophanes staki Type

Loc 284 Yefoneca, Chihuahua

Temp. Assoc.

4615-4620 3 duck bones

Loc 505 Michoacan, Galeata fm

" "

#d 3166 + 4632 2 coracoid bones

Loc 437 W. side Patigochi, Chihuahua

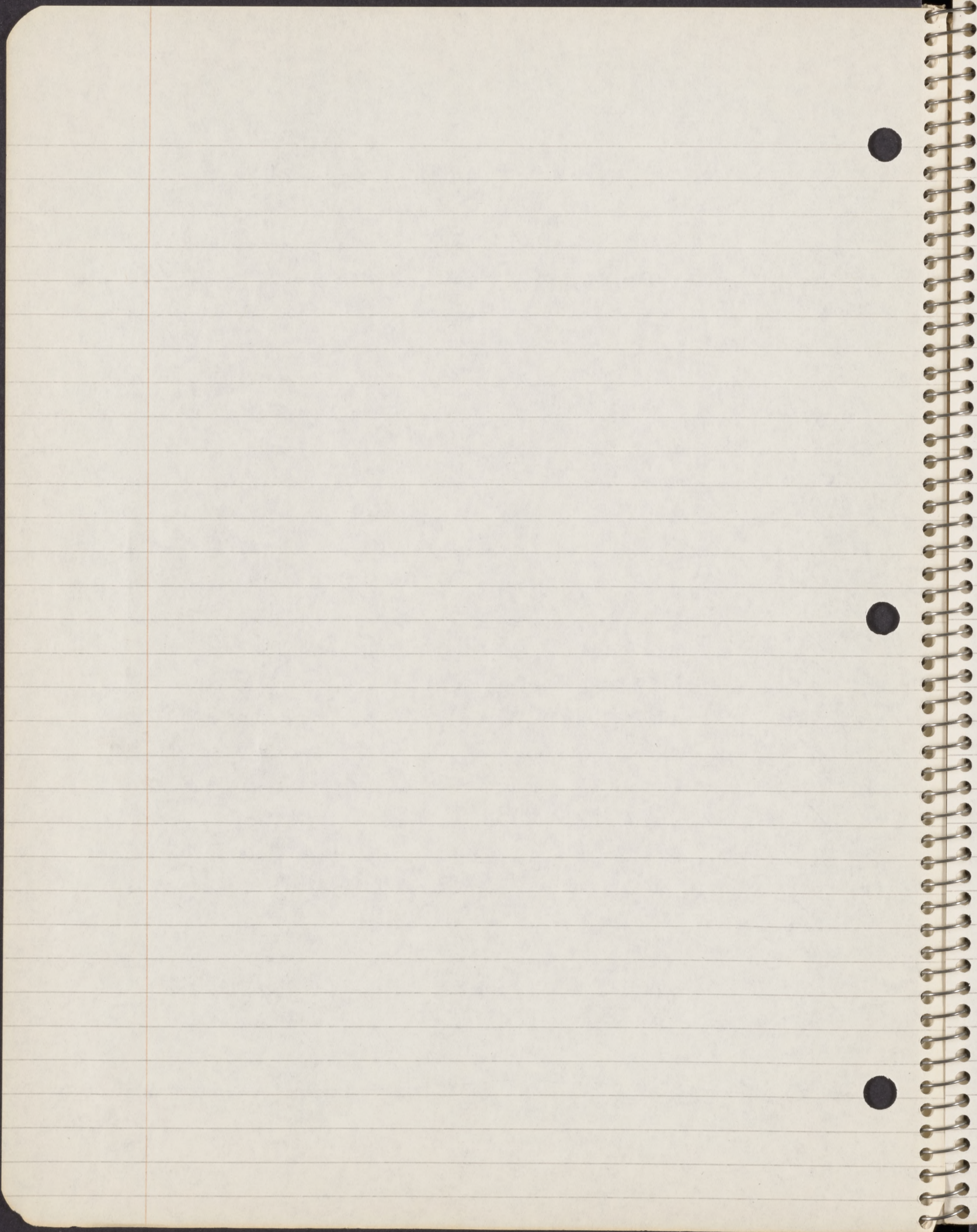
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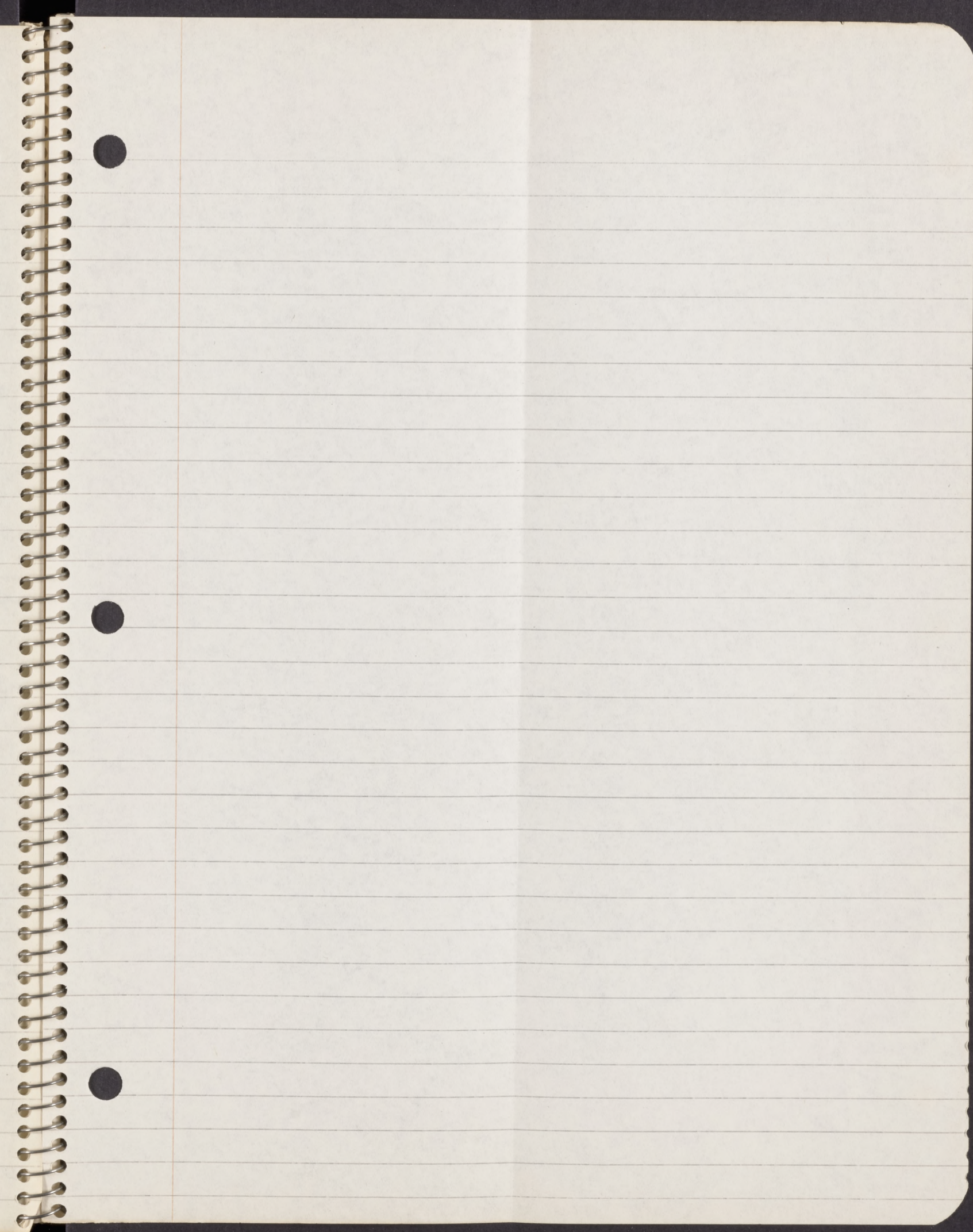
no# Phoenicophanes phalaropus

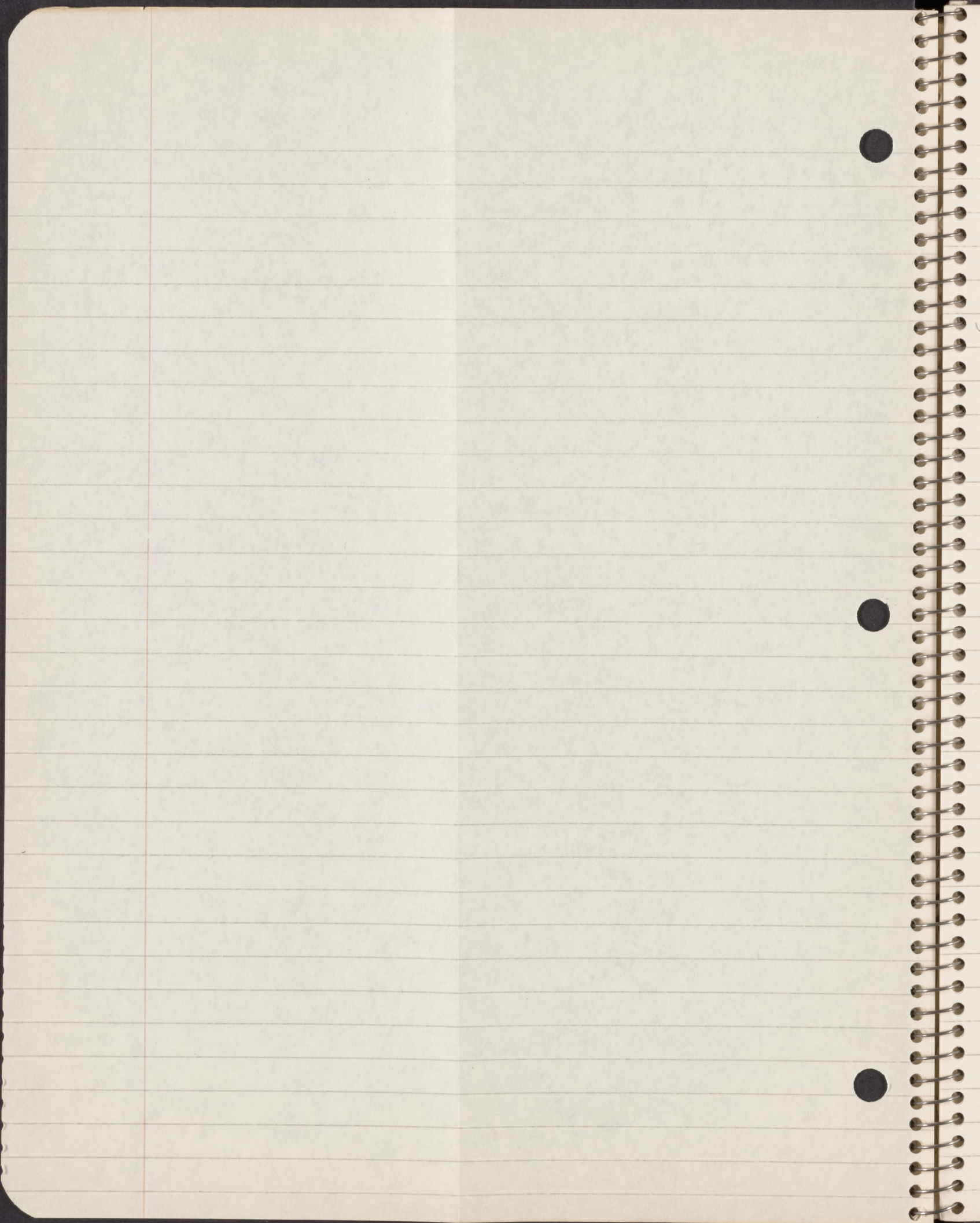
Loc 1013 Packard's Hill, Sta Barbara

Case 17

#d 686 shaft of Phalaropus







3, 18, 66

Identification for Dick Tudford from
"Airport Lake L.P." White Hills fm in
Southern China Lake Basin

Early Devonian ? @ to Mammals Bay Dick

V 6313

Whistler
4.7.63
Whistler Tudford
11.16.63

Haliaeetus (leucorhynchus) incomplete large ^{right} scapula

V 6431

Oxyura jamaicensis, distal end left humerus

"from top of greenish silt E well "Shull Canyon", White Hills

Ridley
1944

V 6311

NOTS, Dry & Kern.

"NOTS 12.3" White Hills fm.

Phalaropus rogersi - Coracoid (incomplete) (left

DPW41

V 6308

Reclinophorus occidentalis - R & L coracoid + scapula

2 prox tarsometatarsus

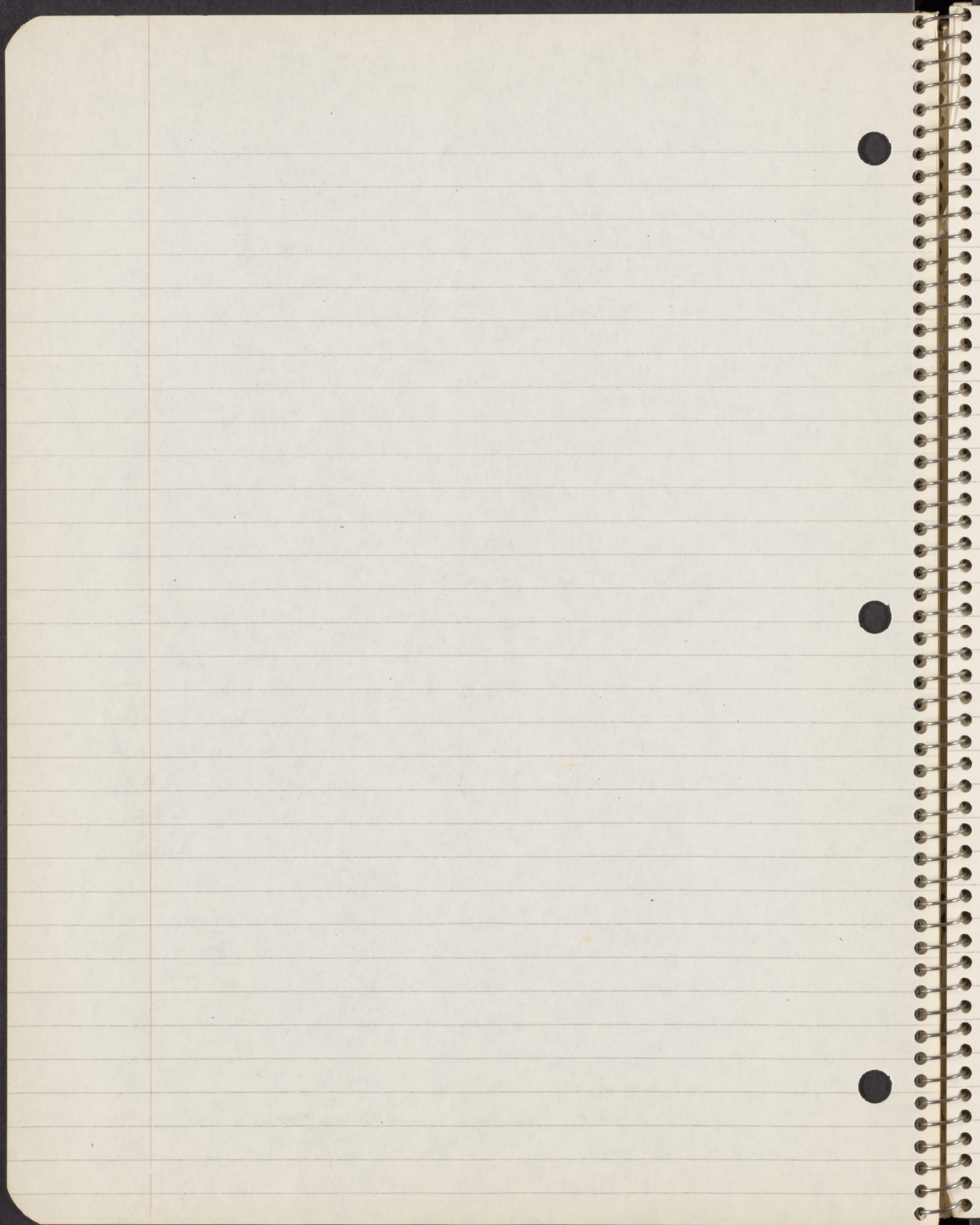
1 frag distal end fibiotarsus

1 " " shaft humerus

1 " " end radius

2 frag mandible (upper)

1 pedae phalanx



Identifications from Manix Lake for G.T. Jefferson

9-3 - Ileg., coracoid and glenoid facets of right
very large Pelecanus erythrorhynchos

9-6 - ① Very large right complete tibiotarsus (length 122.3 mm,
which is above ave. for Recent Archimiphous occidentalis
but slightly below average for Pelecanus o. lucasi.)

② Right coracoid, slightly small for A. occidentalis (41 + 9 = ?)

③ Two synsacra Arch. occidentalis

④ Distal fragment large right femur A. occidentalis

⑤ Ileg. prox end 1 shaft tibiotarsus. pale, presumably
Archimiphous occidentalis.

9-6 Proximal & distal fragments of left coracoid of
Ciconia maltha

9-6 Right scapula & left upper fragment of coracoid, & P shaft humerus
Branta canadensis

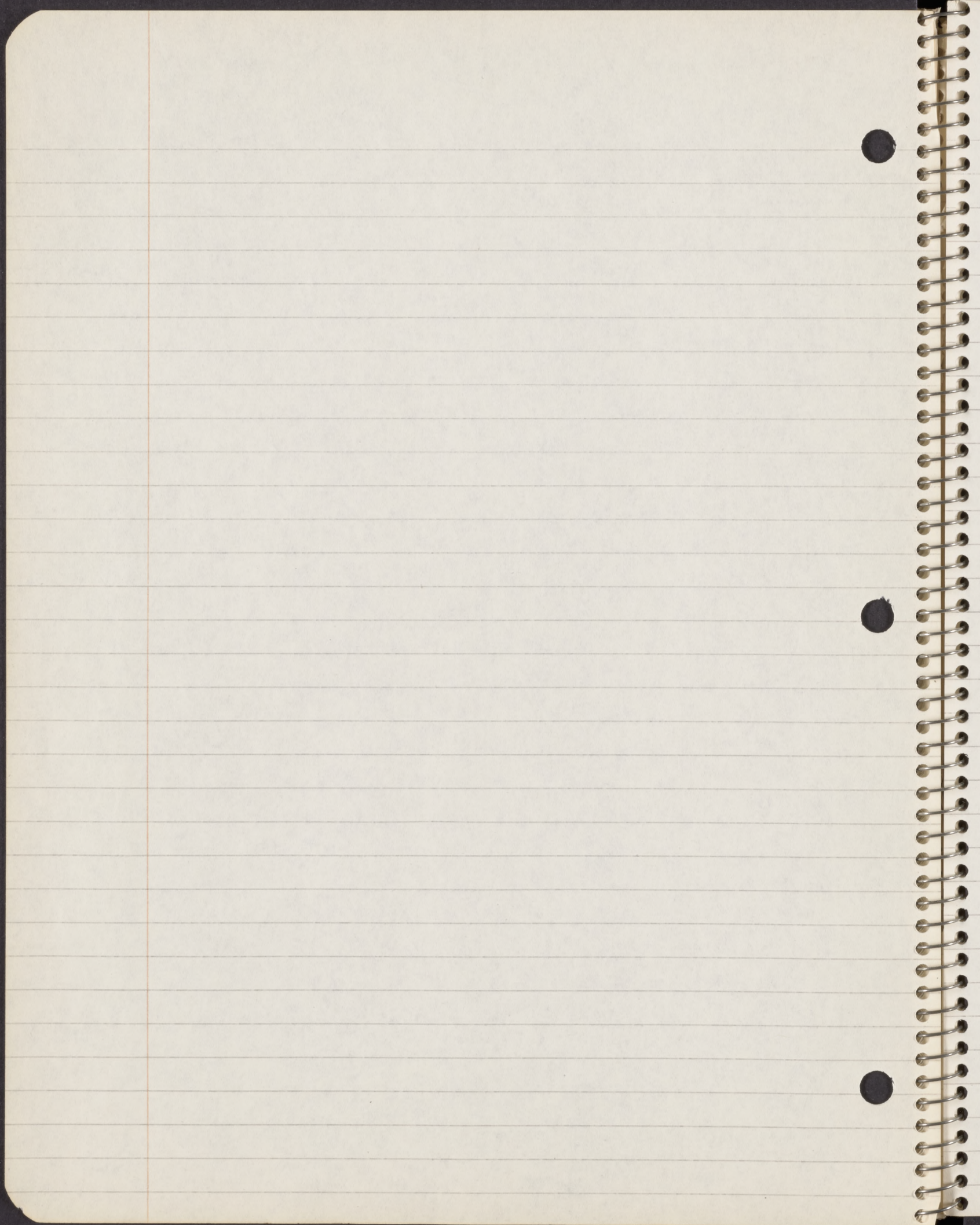
11-1 Middle shaft & glenoid & proximal end left coracoid of
a large Megascops: Megascops (americanus)?

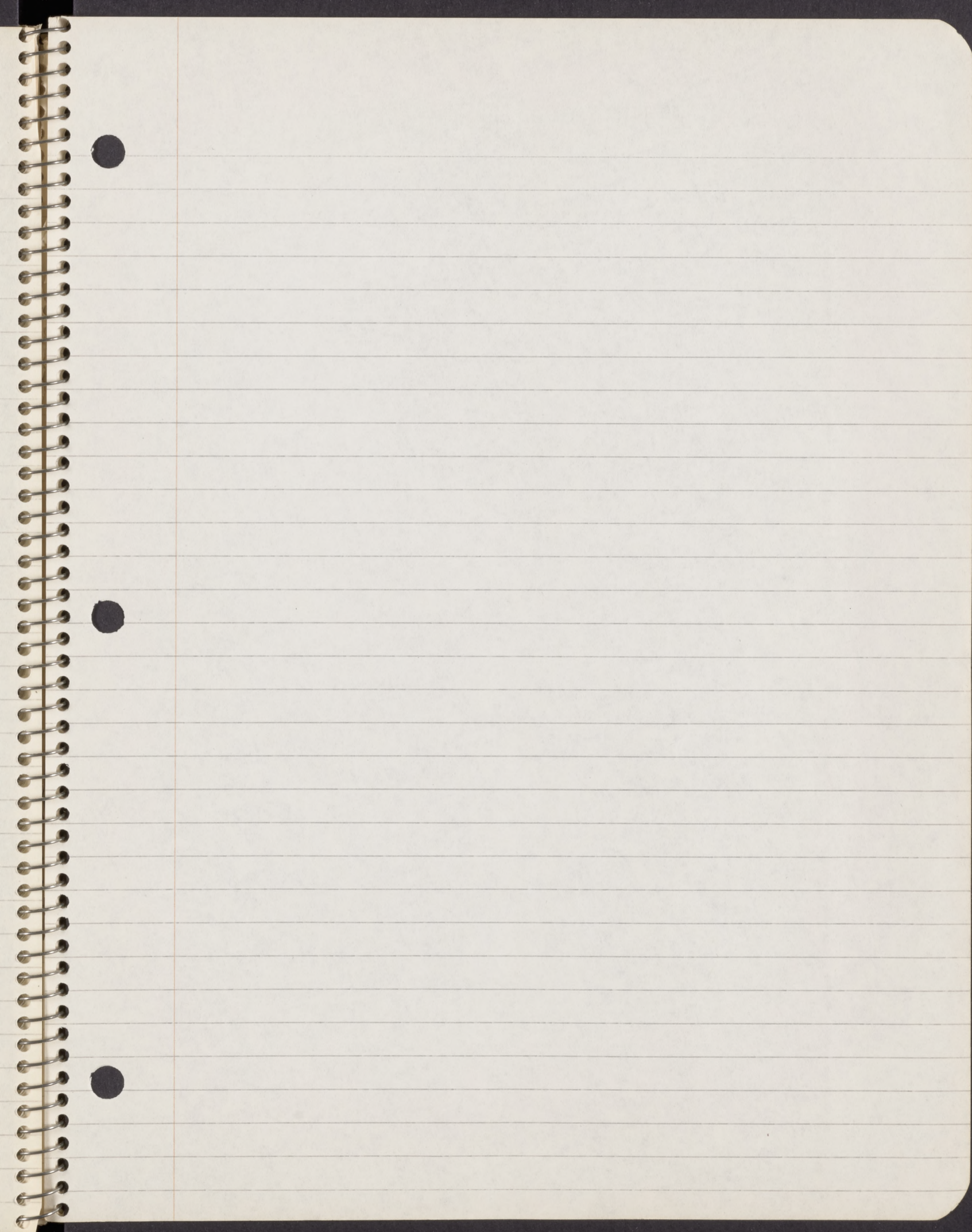
4-7 Left frag prox end scapula - Phoenicopterus minutus
(about avg. of small Recent forms: lt glenoid & coracoid facet = 12.2 mm
Bt. at widest part of glenoid contour 12.1 (previous 11.4 & 12.0)

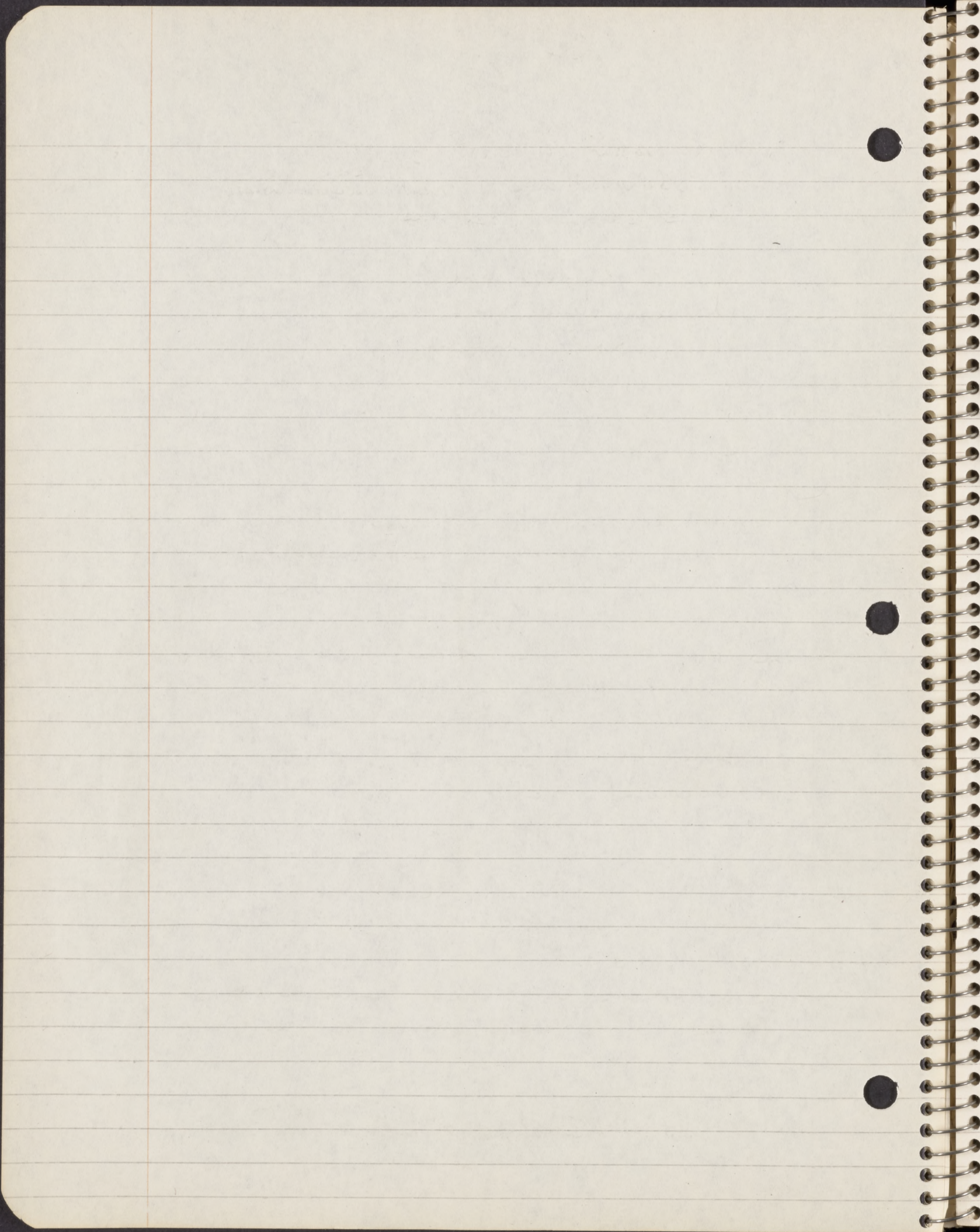
9-2 Prox. & distal ends right carpalometacarpus - depth 15.5, lt M1, 10.9
Phalacrocorax (auritus?) large but unequal to macropterus (16.2-16.4 & 12.1)

9-4 Distal 3/4 right humerus of cormorant not large enough to
be P. macropterus but larger than P. auritus. Irregular
shape of bursal impression is like P. auritus & carbo (the
"lake type" as contrasted with marine form, & petag.), hence
cannot relate to P. rogersi. Bt. distal end 17.1 (last range of
P. macropterus is 16.6 - 19.8)
= P. auritus.

9-6 Dist end left tarsus, Phalacrocorax (auritus?), 15.4 (max 16.4)
(macropterus 17.5-20.0) Chars. are like auritus rather
than penic.







- Note
skull recorded
was later stolen
while being used
for comparison
record with skull from
Mitchell Pappo. SD

X Pleistocene with Quacapa Blume

Chendytes lauri (large coll. including hirmenus, ulna, carponeta)

Larus (Oregonus?) calurus

Crochua monochata (3) ⁸ vial

Puffins, carpus (heavy)

Phalaropus ferrugineus (3)

Puffins (gracils?) several

Ptychramphus aleuticus capus (and other associated parts)

✓ *Fetal humerus*

Several frags. unident.

Lumberyard San Pedro inlet lagoon, 300 yds. W. of main pier, 1925-1927.

X# SC *Dendryfex fibria*. Another complete record condns 1/21 rec'd Condns SE
792 2010, Jensen 2014 P2,
date 1989

2792 } Ducks (2 sps.) 1 humeral frag, each
2794 }

X Chaudler's Sand B. L. Santa - Coll. Lloyd Jenkins 1950's
(loc. 1087) specimens # 2797-2802

(loc. 1087) specimens # 2797-2802

Dania sp. 2 fraps. sebici 2997

Chondyles laurii coracoid & humeral frag? 2801, 2802 [Condor! 57.136]

Unidentified fibula, carpus

X Same loc. 3,6,54 See TD field notes #418

no 2803 - juv $\frac{1}{2}$ ulua *Asclumphorus occidentalis*

2804 - shaft - Tent 3

X San Pedro ^{CT} 187 *P. guselus* 2852 Condor 51121 (194P) *Chondyles femur* (un#d)

✓ San Pedro ler 1012 *Julica (americana) v. 4* #683 Condor 11
Branta quadrisis iradineae 1949 51/21

X Pulling Hills loc 45107 (Grand Kaibach coll.) 3 ident, 1 shaft.
includes *Taurus albatrus*, lt color suggests Recent

X San Pedro 2nd St East of Pacific Chondylus? pedes flial Condor 5/1/21

X 2nd + Orizaba Mts San Pedro, ^{San Pedro}_{fun.} & ^{Polyhedron}_{fun.} gual loc 1058
recorded Ht 3 Cal Anal Base 43'75, 1944.

X San Pedro Loc 1809 Cor. Gaffney & Anaheim San Pedro 1962
probably Cheedys? #5332

X 3rd one Sta San Pedro Insect loc 98
collected 1948 - egg (in piece) Loc. Buto?

X Eidekman Sand G. Larula loc 1053
Humerus shaft Javia (inner?) #2012
rec'd Bull So Calif Acad Sci 43:75 (1944)

X C.I.T. loc ^{2?} 811 spec. 1470
Tarsus Chondytes lawi, Ventura Co,
San Pedro form. Rec'd by L. Miller

X York Valley, Highland Pk L.A. @ 17342
Paraphano californicus (rec'd?) #3225 ^{unc} recorded

X Workman & Alhambra Sts, L.A. loc 1023
Dist. tibia 982 & phalange 981 P. calif. rec'd #
Condo 38:249 (1936)

X Infernal Hwy, La Brea (valley?) P. calif.
Dist. radius '17 2009 rec'd condo 38:249 (1936)

X Packard's Hill Low Plants Sta Barbara, loc 1013
(ft Victoria St.) sh ulna Phalaranx #686
rec'd Condo 33:30 (1931)

X Freeway, excad 300' East Atlantic Blvd, 1943
Insect loc 424. Gube tibia? not recorded

X loc 1295 freeway, La Co, Turkey tibia 38517 (1958)
Not recorded - fossil? T. other frags, 2805-2807

X Western Ave near turne (?) Palo Verde 1950
"Anomia Bed", phalange and beak fossil?

Pleistocene

- X Conkleup Canyon, New Mexico
 See paper by Howard & Miller (for complete list of birds)
 - X Shelter Cave, New Mexico
 See paper by Howard & Miller (for complete list of birds)
 - X Hachita Cave, New Mexico
 See paper by Howard (1962, Condor: 64:241 for list of birds)
 - can 17 with mammals Dark Canyon Cave Unrecorded
 - O Smith Creek Cave Rec'd 1935 + 1952 Howard
 - X up Pleist. Sepulveda + Vermont (due look (Insect 147) visit, Chendytes?)
 - X Tunn P + fm. Bluff Bruce, Torrance L. Pleist. 1965
 Insect loc 434. Inc. scap. ? Loon?
 - ? — Loc Insect 59. Chendytes femur or is it ^{see from 2012 next page} } are they the same?
 O loc 102 " " (coll 1949)
 - X Palo Verde, nr Redondo (at Vanner) 200' from ocean
 Reduped but ^{old} midden - femur - Chendytes?
 - can 17 O Short Cave, Kentucky galliform femur
 - " " O Baker Creek, Nevada loc 252 Recent?
 - ? — Egg supposedly from Pyramid Lake, Nev.
 - X Apta Pueblo, Ariz. Pleist + anseriform fems
 - X Gypsum Cave - ^{CITR 109} Polybous, condors etc
 - X Athens Blvd - Harbor Lagoon, frag (5, looks recent)
 - O Ballona Cr. nr Buena Vista Ave 1936 excav turkey crani (Recent?)

West Coyote Hills, La Mirada
colled 1968 by Henry Gurba
brought in by Jules Crane

①

Manny Lake loc 1093 = CIT loc 540

rec'd 1954 USGS ~~monograph~~ ^{Pub} ~~for~~ ^{Re} Pub 264 p. 199-205

Helendale Marl San Bernardino Co. Ia 1184

2 human pigeon? Coll Feb 1957

6

Carfentini

10

McKitch

11 D

0

LaBree

11 0

2

Valley Creek

4 0

Schubling Cave

Case 17 C

○

San Nicolas Id. mid Pleist. rec'd 195

11 11 0

0

Sta Barbara Id Mitchell 345 PacM/P327

Nalaeetus caurus. #6433

и у О

A circular stamp or seal, possibly a library or collection mark, located at the bottom center of the page. It contains some illegible text or a logo.

San Clemente Id., 1 phalanx (Recent?) ^{Mitchell} loc 335

а ч о

Bixby Slough Chondytes fenn #2011 recorded
1949

19492
Condor 51221

Type Case



Sta Rosa Id, CIT 106 *Amo prasinus* n.sp

- TYPE Tibialaisur # 4729 TH PE case

case 17 Q

Q

Sta Rosa CIT 106 (?) Caracara melitosa n. sp.

1962 Acad Bull 61:227

case 17

○ Isla Rasa Id. C.I.T. coll. goose bones 4717-4723
mostly recorded H 1949, under 51120

case 17

○ Del Rey (loc 1024)

case 17

○ Newport Bay loc 1066

Mexico

Case 17 ○ Punta China loc 65104 Bga Catf. Qualtans off?

case 17

○ San Marcos, Jalisco

6 bones #9237-9242, Humer, eagle, and
Myiarchus - sp? unrec'd

case 17

○ Atotonilco

case 17

○ Tequisquiac, district of Zumpango

case 17

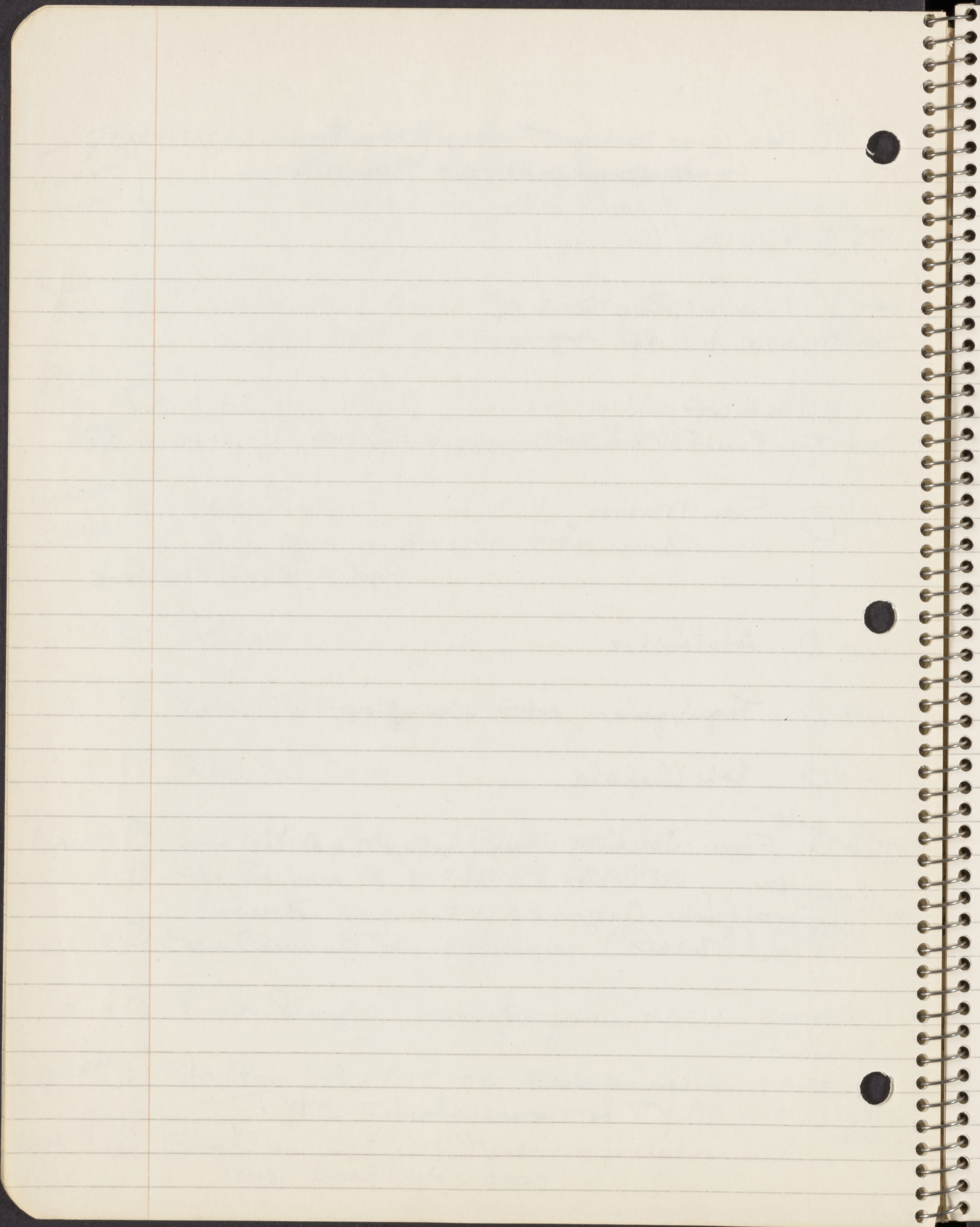
○ Lake Chapala

with mammals

○ San Jacinto Cave rec'd by Miller

with mammals

○ Jossil Lake, Oregon



Recorded by Howard 1968 LACM Contrib Sci no. 142, pp 1-21, figs 1-2

Loc. 1945 - Laguna Hills Seismic Well, Orange Co Calif. Late Miocene
200 bones, 120 of which can be assigned to families

Procellariiformes

Diomedea 2 species

Tarsal shaft 17550

Pedal phalanx 18271 (D. californica?)

Puffinus californicus n. sp. Type dist. end² humerus 17508 Howard 1968 fig 2 ATE

Another dist end humerus (L) 17539

Prox end right ulna 17530

Prox. 3/3 left tarsus 17582

One dist end humerus 17540

2 frags. tarsometatarsal shafts 17524 fig. 2 B, C, D

Puffinus priscus Müller?

frag distal end humerus 17548

One prox ^{part} ~~end~~ ulnar shaft 17547

Prox end of tarsometatarsus 17538

Puffinus sp. larger than P. californicus or P. priscus

One, prox end tarsometatarsus 17549

Large distal end " 17523

43 other Puffinus bones including

4 coracoids (one) 17525, 17529, 17531, 17534

distal end of femur 17516

Hulimarus hamneri Howard n. sp. Type prox end left carpometa. 15262 fig. 2 FTK
and a dist. frag. of a right humerus 15263

Pelicaniformes

Osteodontornis ozri Howard? frag of lower mandible 17557

Microsula sp. humerus 17556, dist end carpometa. 17555 (similar to Microsula australis)

prox. end tarsometatarsus 17554. (Possibly Sula willetti = Microsula willetti)

Morus longirostris? Dist end + tibio tarsus LACM 17570

2 prox ends radii 17574, 18268 (2 whether belong with tibia)

preservation
different -
hard weaker
wear marks

{ Microsula sp. coracoid 17569, radius 17568, carpometa. 17566, 17579,
tarsometatarsus 17569, femur 18269, 2 quadrates & a sacrum unnumbered

Laguna Hills ca 1945 - continued

Pelecaniformes continued

Sulidae sp. 2 dist end radii 17572 + 18264

complete cuneiform 17562, artic frag of scapula 17560

middle trochlea of tarsometatarsus 17575

3 dist frags of carpometacarpus 17558, 17561, ~~17578~~ ¹⁷⁵⁷⁵

Anseriformes

Presbycher abauensis Wetmore

frag of prox end of tarsus 17552

Tarsus 17553

Scapula 17551 foramen absent as in swans

Anserinae sp. dist. end of radius 18270 size of B. nigricans

Charadriiformes

Alca sp. frag of right coracoid 18282 lacks head, r tip of procoracoid
and humerus lacking, prox end 18283 shorter stouter than A.orda

Certhya sp. prox end ulna 18274 smaller than C. monacerrata

size of C. debilis from Longford?

frag of shaft of humerus? 18275

Puffinus puffinus n. sp. Type comp. ulna ¹⁸⁹⁴⁸ fig. 2-3

left humerus dist end ¹⁸⁹⁴⁹ fig 2, I

Dist half ulna?, 18960

Prox half radius?, 18953

Dist 1/2 carpometacarpus? 18951

3 frag coracoids? 18952 + 18954 (new)

Alcidae, ^{cf. tuos sp.} 5 frags. ; 2 coracoids 18276 (size of Cepturus columba)

prox end ulna 18272; 2 tarsometatarsal fragments 18273 + 18281

Alcedo ulmulus n. g. n. sp. Type left comp. ulna 18277, fig. 2. H

dist. end right ulna 18279

prox end right carpometacarpus 18278 fig. 2 - Gaudin

Prox ^{frag} right ulna? 18280

Praemaula lagunensis Howard 1966

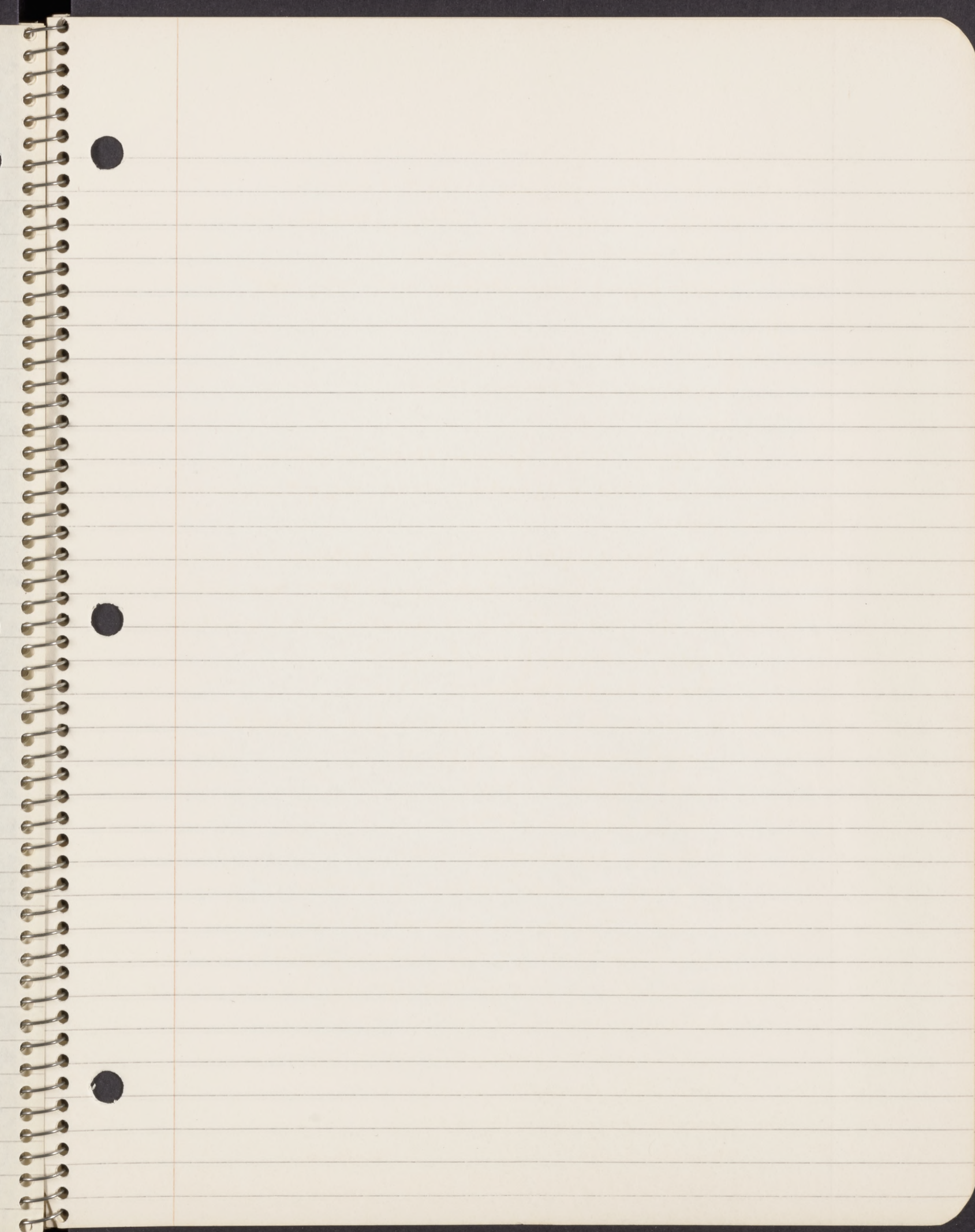
Humerus (type)

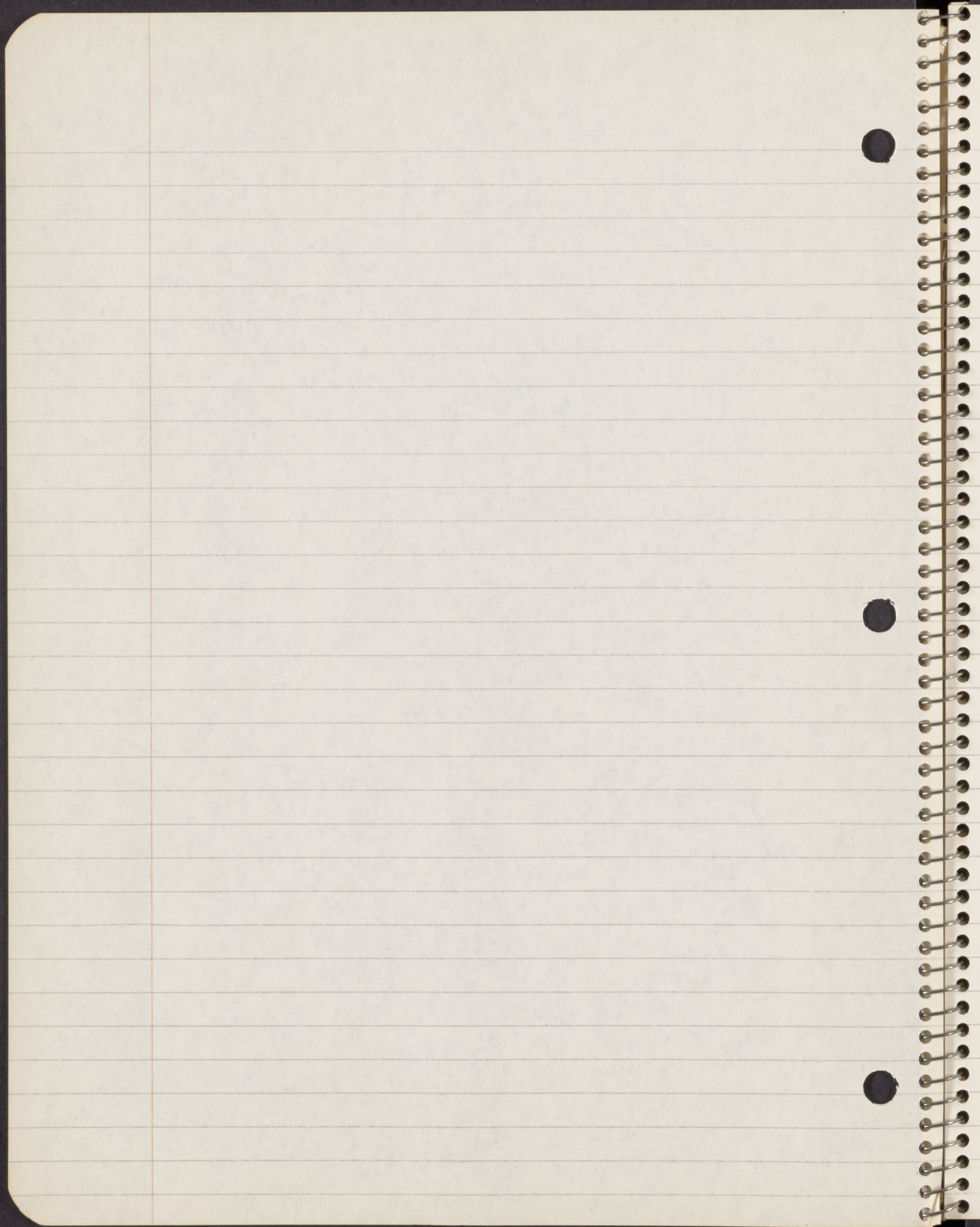
Coracoid

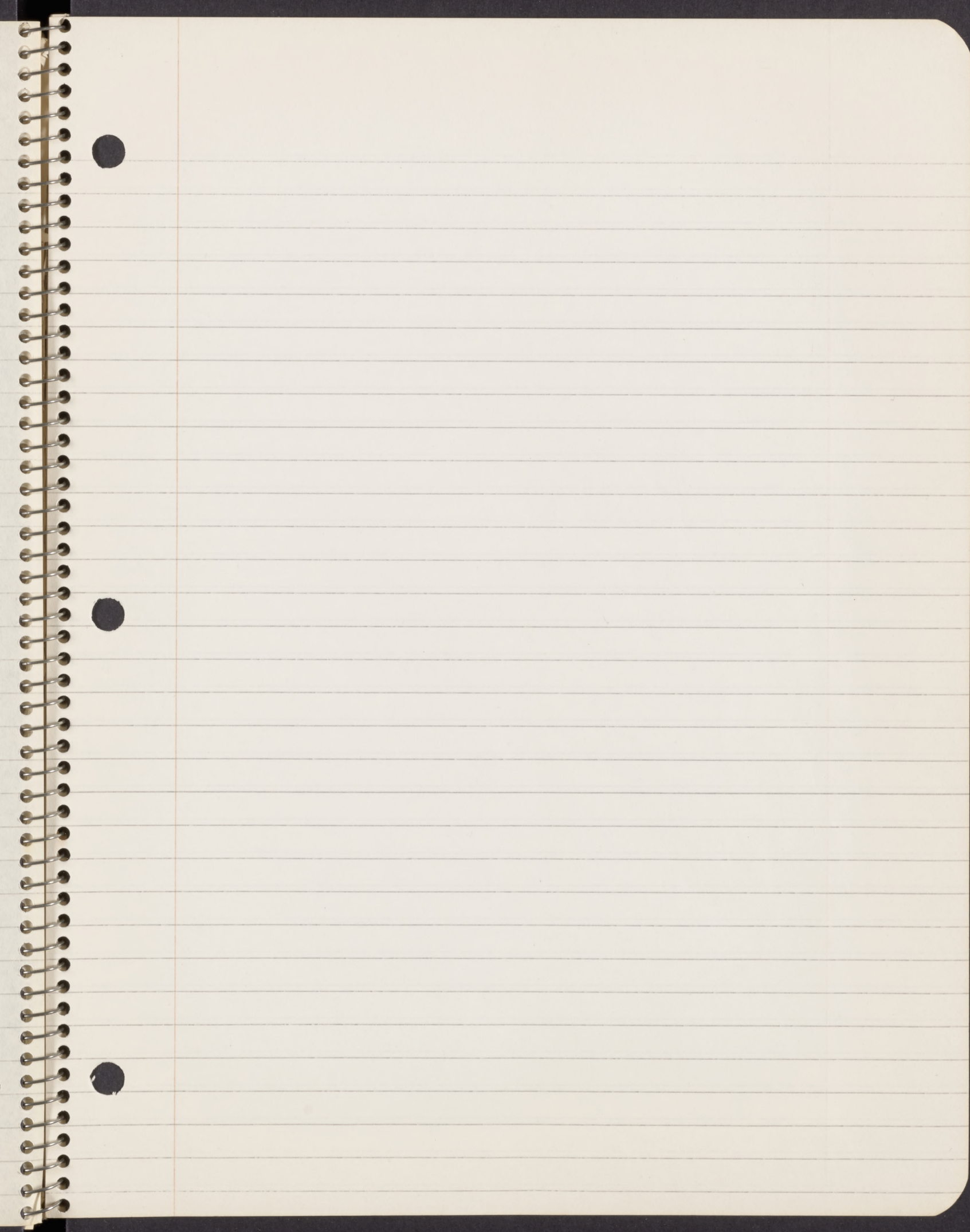
Carpometacarpus (2)

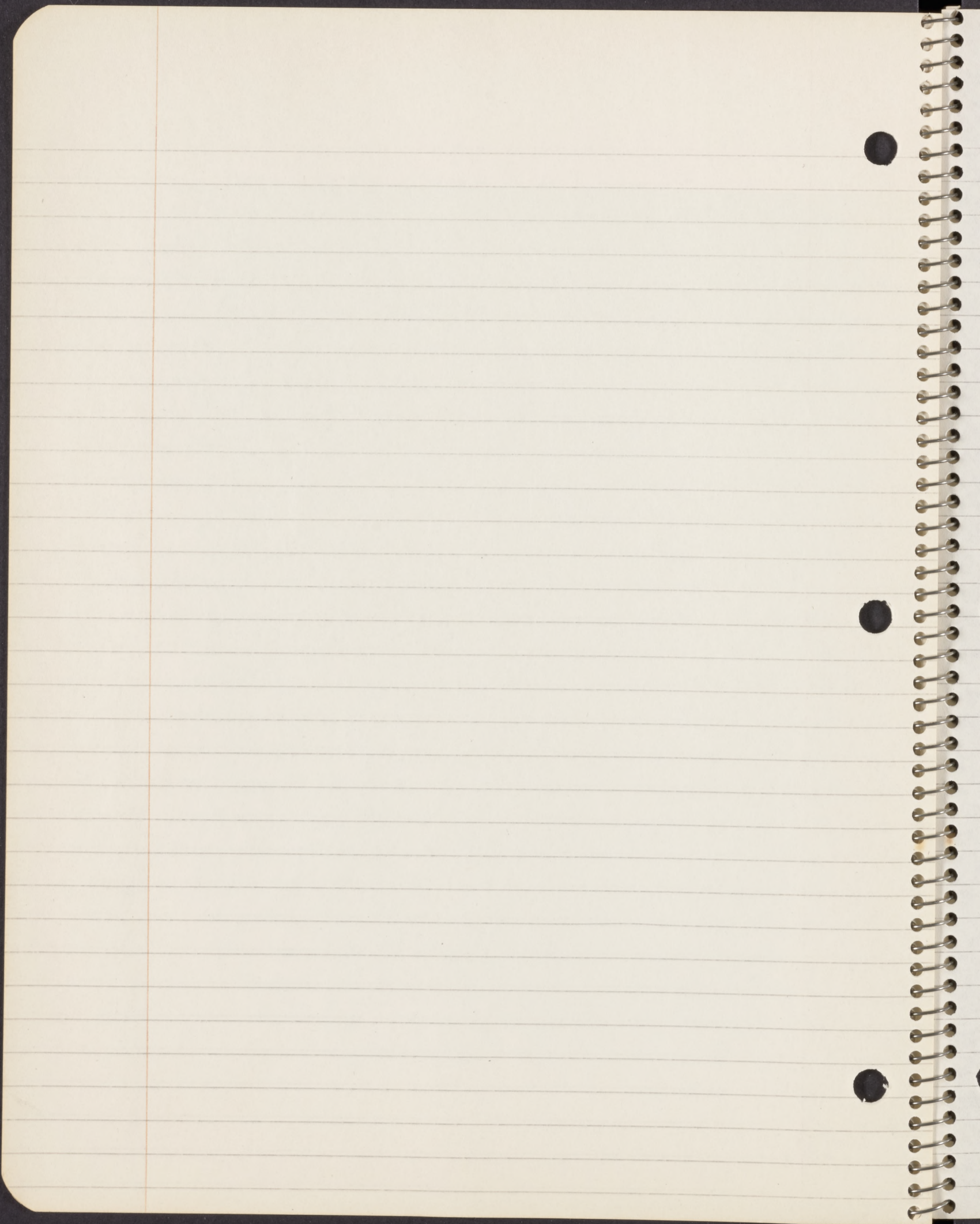
scapula

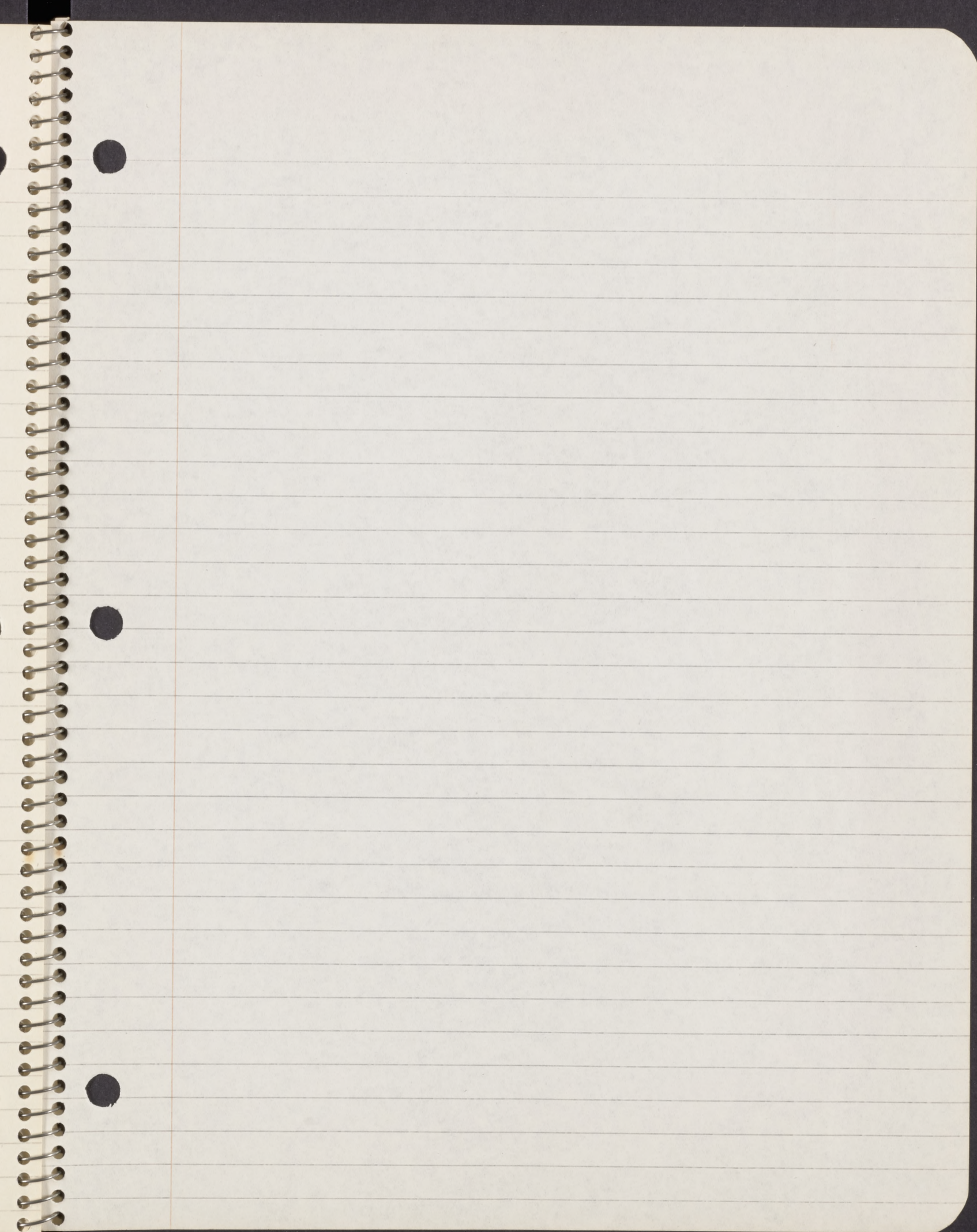
frag. lower mandible

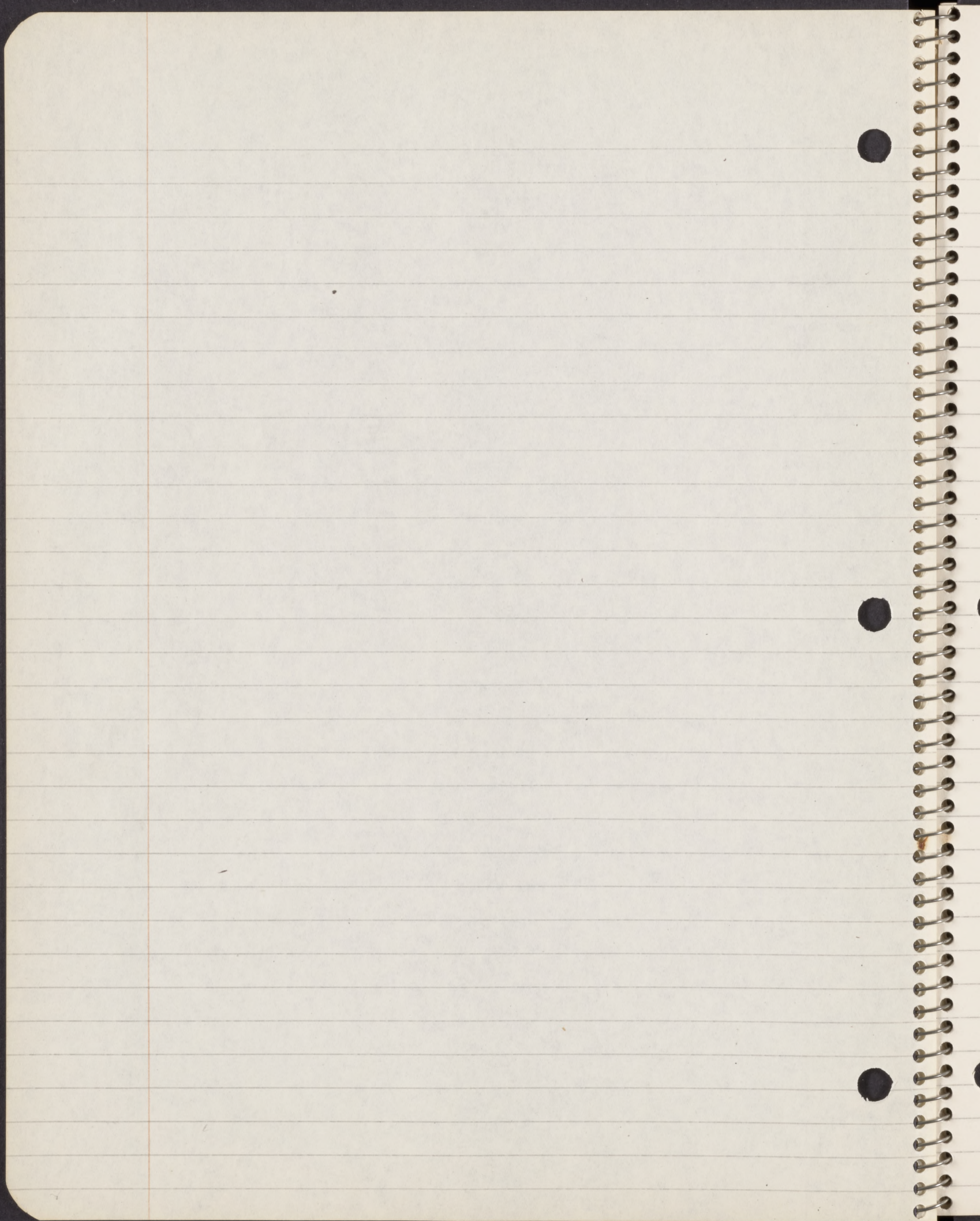


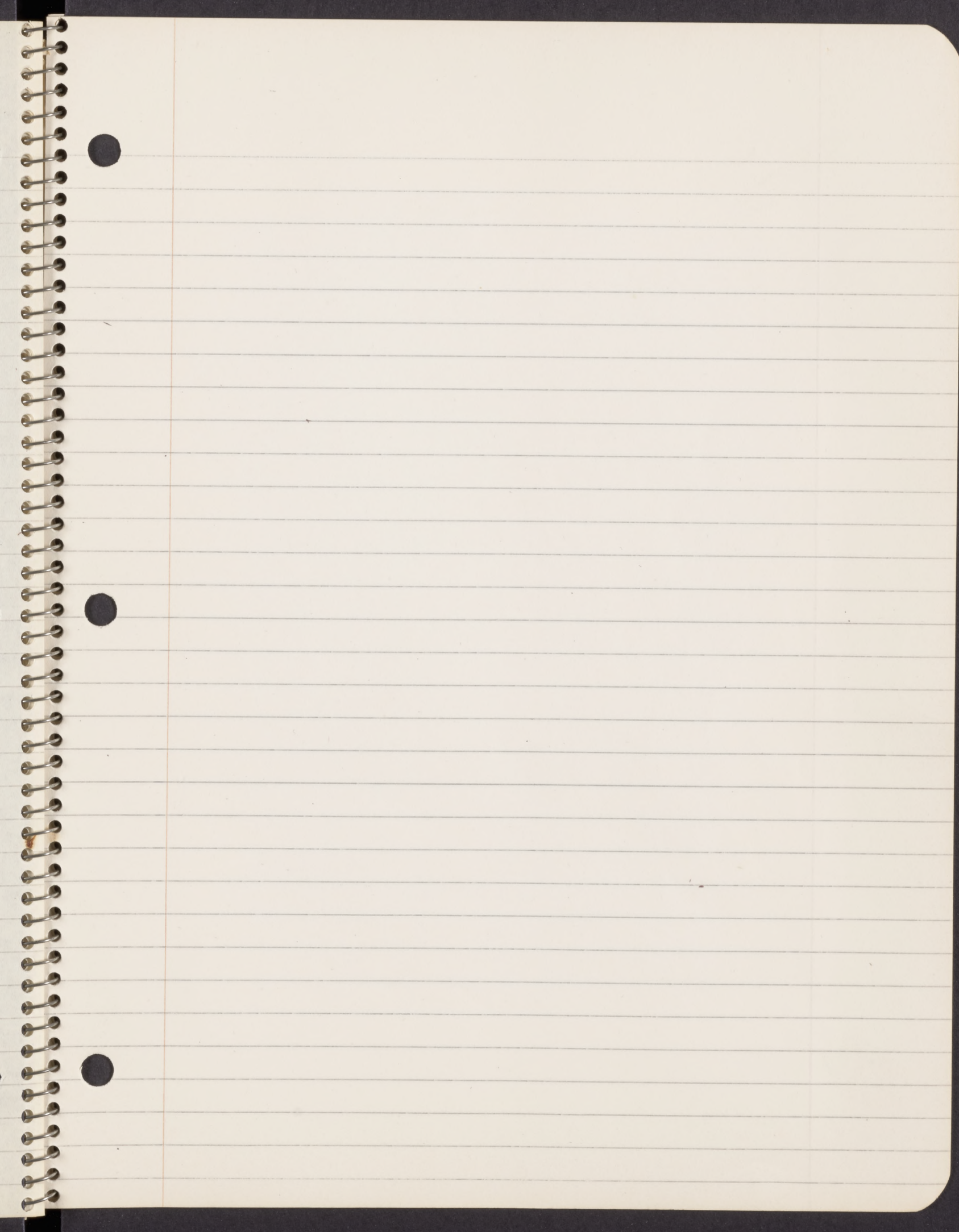


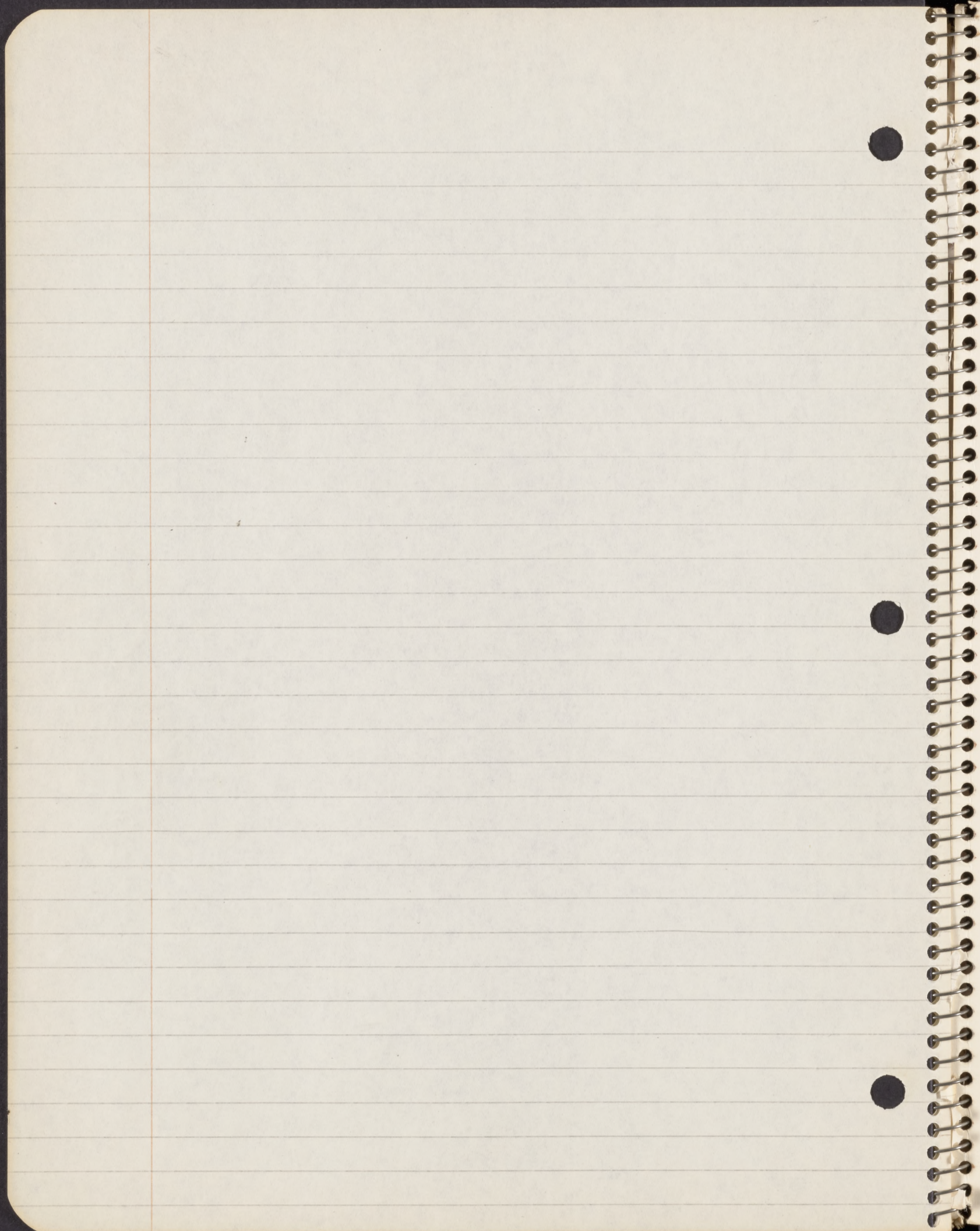


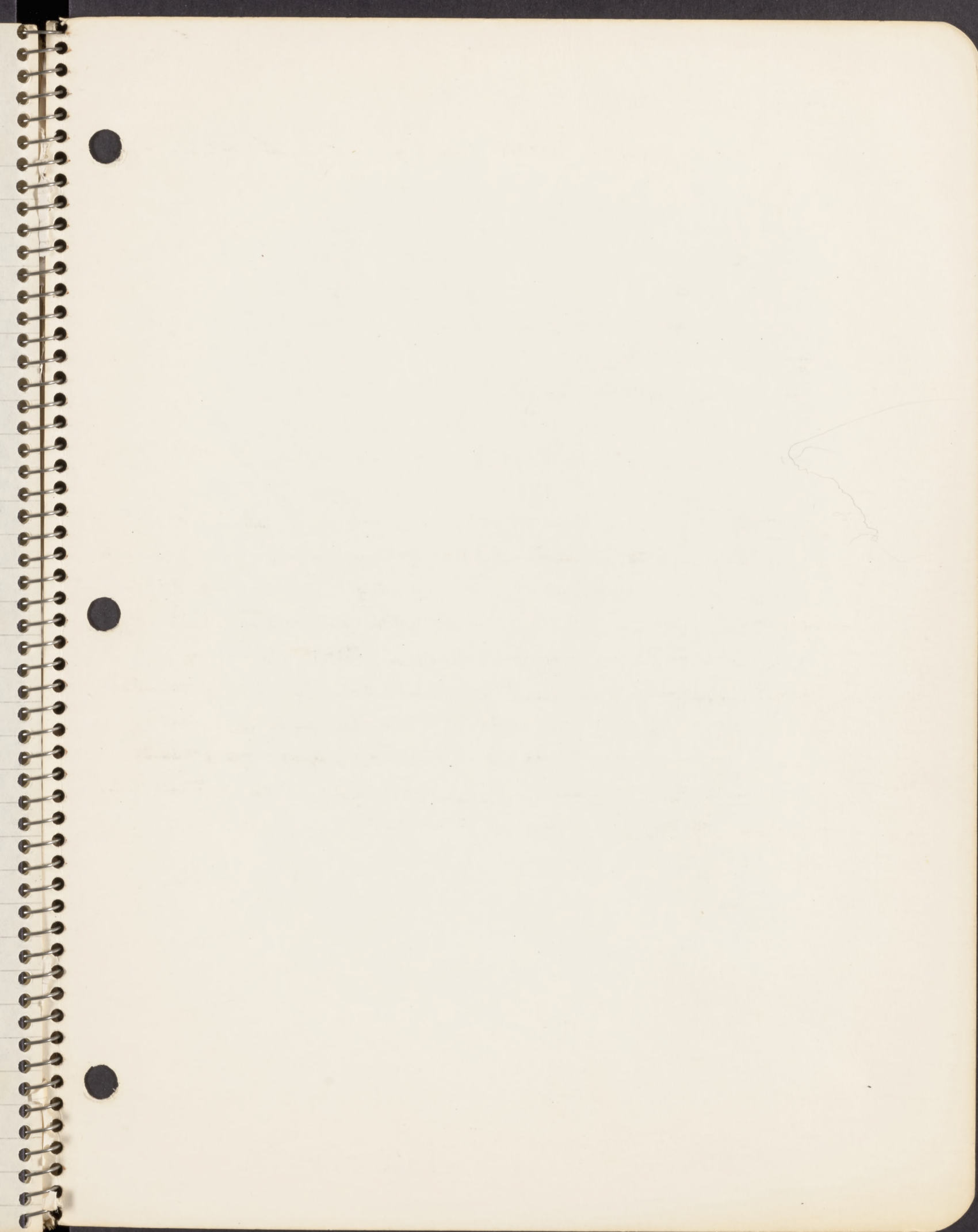


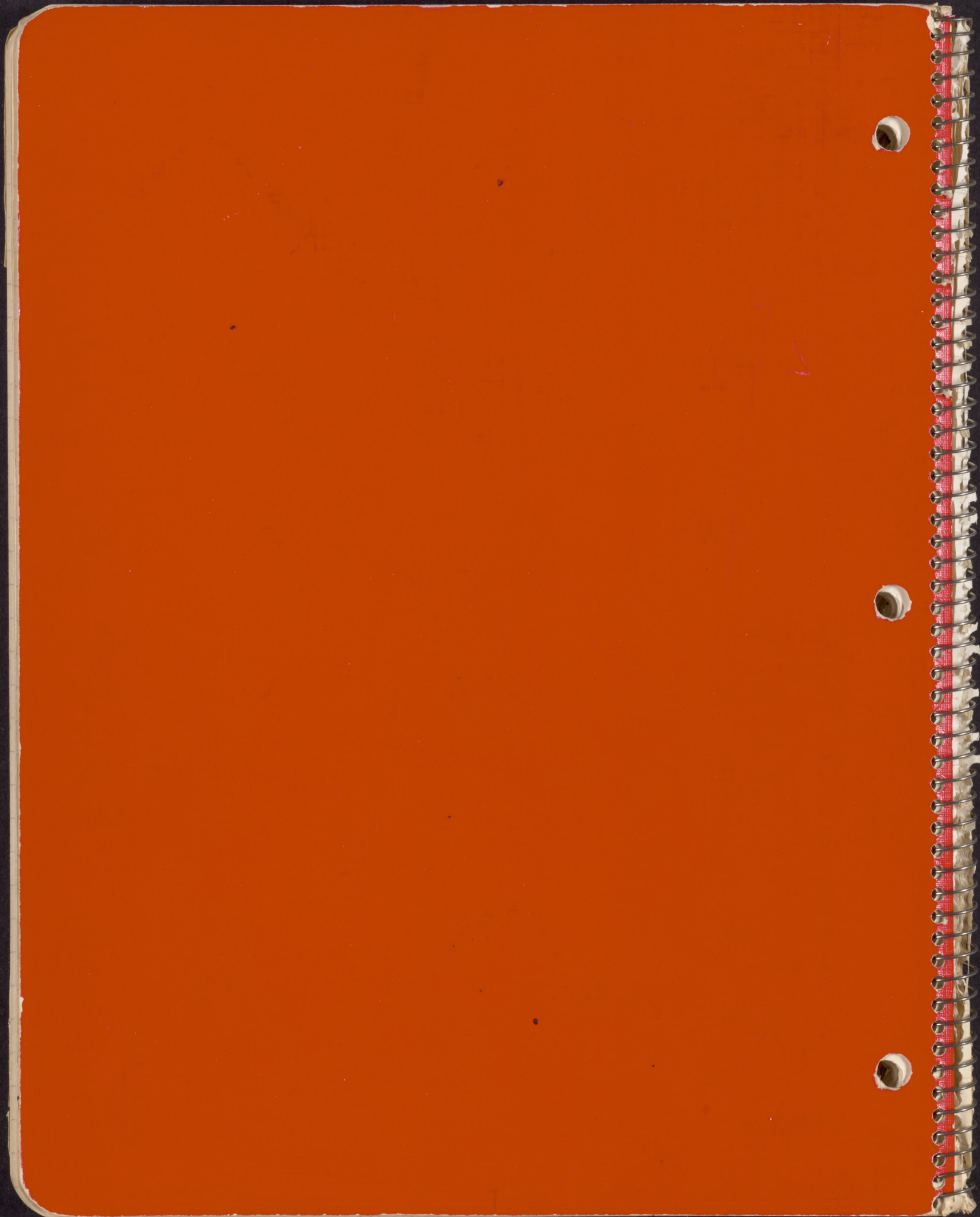












25¢



B. ARVEY
**THEME
OR
COMPOSITION
BOOK**

©1957

BIRMINGHAM PAPER CO.
Birmingham, Alabama

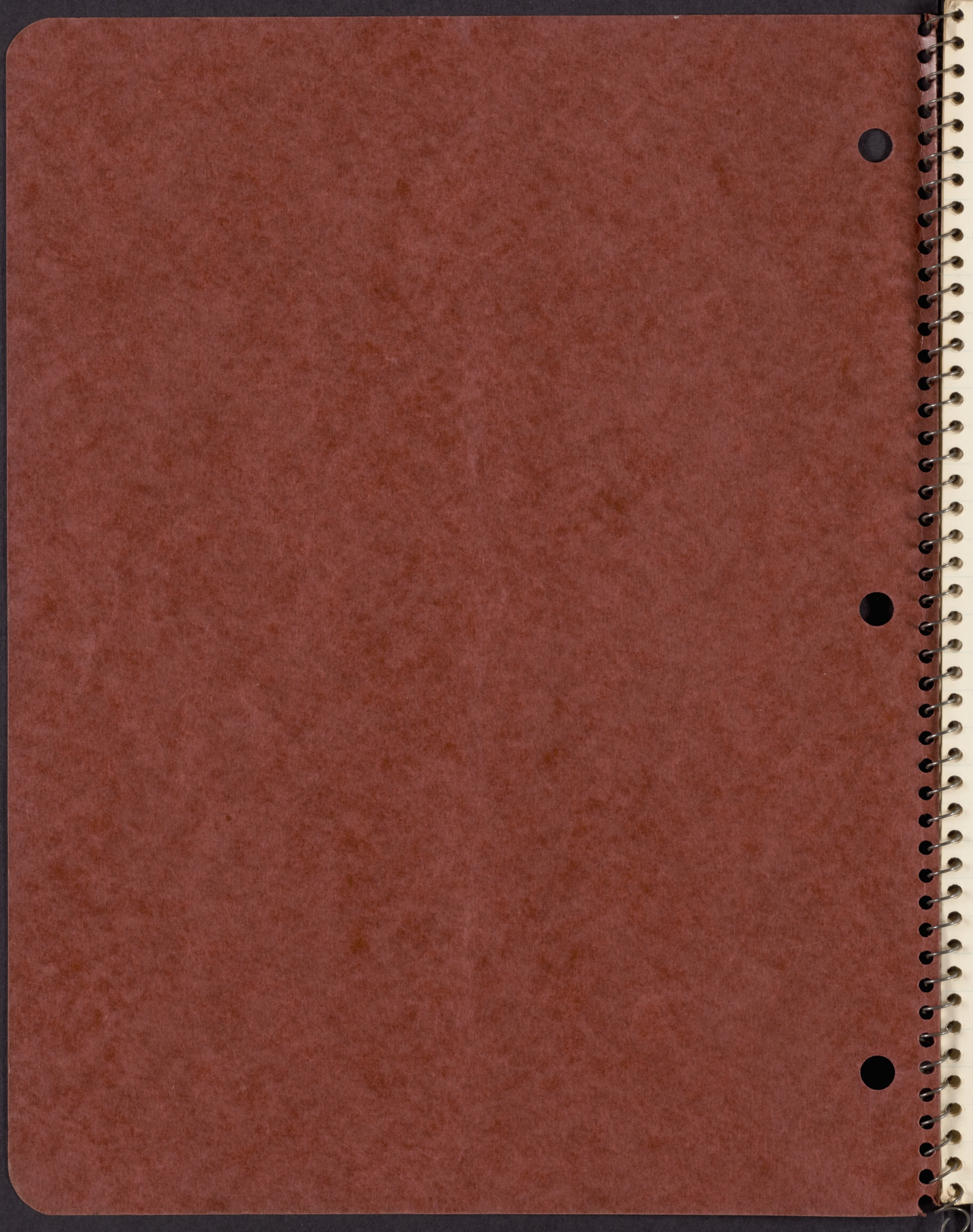
NIFTY TABLET MFG. CO.
Houston, Texas

NIFTY MANUFACTURING CO.,
Riverside, California

SIZE 11 X 8 1/2



Regular Ruled 5185
Narrow Ruled 5195



Bill was hired
by me (H)
under Giffenheim
fellowship funding
1962

Bill Atwey's record of LACM birds
as we went through the collection
together - 1962

✓ 7-2-62 Loc. 1123, Schuling Cave, Pleistocene

Case # I - LA. Co. Museum case. Drawer 5. Left side

✓ species. Colaptes cafer Mat. Prox. portion of humerus

Loc. 1123, Schuling cave age Pleist.

✓ species. Mareca americana? Mat. Distal Portion of Humerus

Data - Same as above

✓ species. Erismatura jamaicensis Mat. Prox. portion Humerus

Data same as above.

✓ species: Nyroca cf. ~~am~~ americana Mat. Coracoid (another?)

Data Same as above

Species: ✓ Aquila chrysaetos Mat. Prox. end femur -

✓ Mergus ~~merganser~~ Mat. Cranium.

✓ Corvus corax Distal end of ulna

✓ Bubo virginianus Mat. Various limb fragments (5 recorded)

✓ " " Mat. tarsometatarsus, & Tibiotarsus

✓ Recurvirostra americana - Prox. portion Coracoid

✓ Fulica americana - Carpometacarpus, tarsal frac., humerus prox. portion

✓ Buteo jamaicensis Carpometacarpus (another?)

✓ Anas cf. carolinensis Coracoid, ulna

✓ Anas cf. Platyrhynchos radius, prox. end

one more? ✓ Gymnogyps amplus partial upper jaw

✓ Zenaidura macroura Coracoid

Other unidentified bird bones from this locality include

1 prox. portion Coracoid, 2 prox. portions radius, 1 claw, ~~1 prox. portion~~

1 dis portion ^{Coracoid} ~~Coracoid~~, 1 vertebra. 1 box of pack rat ~~depos~~ deposited bird bones

(left)

✓ Case #1 Drawer #5 L.A. Co. Museum case

Max. Various identified & tentatively identified bones

Loc. Vallejo, various localities

(See also label p. for unidentified material)

✓ Tier ~~37~~ 37 A to I and 38 A to I all McKittic

Case 35 Drawer 35A

Loc. San Josito Cave # 192

mat. unidentified bird humerus in rabbit material, also scapula, tibiotarsus, coracoid,
~~Case 36 Drawer~~, humerus also 4 femurs and 1 proximal portion of femur
1 humerus and 2 humerus end portions, 1 tarsometatarsus, 1 end portion Carpometacarpal
1 end portion (distal) tibiotarsus

Case ~~35~~ 36 Drawer 36I

Loc. 192 San Josito cave -

Various unidentified bird material from both matrix and Talus.

in small brown box - 3 bones from cave matrix, 1 tibiotarsus,
1 femur, distal portion, 1 metacarpal #2.

in cigar box, - 188 unidentified Bird bones from Talus

in yellow film box - 13 unidentified Bird bones from cave matrix.

Case # 45, drawer # 45E (see also next page)

Loc. 1283 / Zocoalco, Lago de Chapala, Halisco Mexico

mat. 3 bird, 1 tibiotarsus distal portion, 1 humerus, distal portion,
^(passerine?)
radius (prox.) very small;
1 other # 1129, - 1 carpometacarpus prox. portion, 1 humerus distal portion,

1 ulna prox. portion, 1 tarsometatarsus, 1176 1 coracoid.

Case 45, drawer 45L

Loc. 308, 310, 311, Distrito de Zumpango

Mat. tibiotarsi 1 distal & 1 prox portion, 1 tarsometatarsus, 2 humeri,

2 coracoid, 1 vertebra, ~~1 ulna & prox. portion~~

$$\begin{array}{r} 4 \\ 218 \\ \underline{16} \\ 238 \\ \underline{48} \\ 768 \end{array}$$

✓ Case -43 Drawer 43L

1 humerus distal portion - 1136 / 3166

1 corocord complete cit. 505

Formation - Goleta age. Pliocene

Loc. Morelia, Michoacán, Mexico.

✓ case 41 Drawer 41 H

1 ulna ^{distal} ~~prox~~ portion 1 humerus distal portion

Loc. 276, Rincón Mexico

✓ Case 45 - Drawer 45E (see also ^{previous} ~~last~~ page)

1 carpometacarpus, 1 tibiotarsus distal portion, 1 corocoid

1 ulna distal portal

loc. Lago de Chapala, 1129 Jalisco Mexico

✓ Case 40 Drawer 40E

1 humerus, 1 clavicle > anser
1 ulna

loc 2800 Arroyo de las Barrancas Blancas, Yepomera

Chih. Mexico, 1/4 mi E. of town 1946

Middle Pliocene

Additional Bird bones in Cal tech coll.

Aug. 31, 1962

40K - 2 Femur heads,
1 scapula

31L - distal coracoid

30H - 2 humeri, tibiotarsus & femur - fragments

26G - humerus (recent?)

25K - coracoid head

24B - scapula

✓ Case 40 drawer 40K

1 humerus, near complete, 1 ~~coraco~~ coracoid

Loc. 289, Rincón Mexico

✓ Case 32 drawer 32F —

5 osteo. boxes of Bird bones — Pleistocene

Loc — Aztec Ruin & Misc. Loc.

ARIZONA Misc. Loc.

✓ Case 32 Drawer J — 2 boxes of Bird bones

Lovelock cave Nevada, Leonard Rock Shelter #2 0 - 108" x 108" - 126"

from Datum B - Univ. Calif. excavation A4353

✓ Case 31 - Drawer K

1 Bird femur

Loc. 47 Rome Oregon

Owyhee pleistocene

Case 30 drawer H

Tibiotarsus, distal and prox. distal ulna

San Pedro Valley, ~~Choc~~

Case 30 Drawer 30A

Locality - 137 - ~~3045~~ - ~~3300~~ - Fossil Lake Oregon

Age. Pleistocene

(13) ³²⁹⁵⁻³³⁰⁶ Duck sps. - 2 coracoids - 1 carpometacarpus - 3 ulnae, 2 humeri -
1 fragment of pelvis - 2 radii - 1 femur.

3289 (17) Nyroca americana - 1 Coracoid

(5) Fulica americana 3309-3313, minor, - 1 humerus - 1 coracoid
1 tarsometatarsus (young) 1 tibiotarsus, 1 tarsometatarsus (complete)

(1) Nyroca affinis 3290 1 humerus

(19) Aechmophorus occidentalis lucasi 3246-3264 - 2 humeri, 6 femora - 5
coracoids, 2 tibiotarsi - 1 carpometacarpus - 1 fibula - 1 toe bone, 1 ulna

(2) Erismatura jamaicensis 3292, 3293 - 1 humerus, 1 coracoid.

(4) Goose sps 3281-3282, 2 tibiotarsi, 3283 1 scapula, 3284 1 radius,

(1) 3276 - Branta canadensis ? minima ? - 1 carpometacarpus

(1) Branta propinqua or anabernicula 3278 1 coracoid

(1) Branta canadensis 3275 - 1 coracoid

(1) Phoenicopterus copei 3270, 1 tarsometatarsus - 2 pts.

(21) Bird - misc. fragments - 3 vertebrae, 1 sacral fragment, 7 toe bones,
1 wing phalanx, 4 sterna fragments. 3 tibiotarsi, 1 radius,
1 tarsometatarsus.

(1) Anabernicula sp. 3279 1 coracoid

(2) Sthenelides paloregonus ~~3271~~ ³²⁷² - 2 vertebrae.

(1) Cygnus buccinator - 1 femur - 3273

(1) Swan sp. 1 carpometacarpus 3274

1 Goose sp. 3280 - 1 humerus

2 Grouse sp. 3307 1 femur & Dendragapus lucasi ? 3308 1 tibiotarsus

1 Larus
Larus oregonus ? 1 tarsometatarsus 3315

Fossil Lake 137 cont.

Total 2
 Goose 2
 Gull 9
 shorebird 1
 eagle 1
 unidentified 21

Ducks 12
 1
 2
 1
 2
 2
 1
 22 total

Geese 9
 Anserus 1
 Swan 5
 flamingo 1
 Grebe 19 + 5 (240)
 Coot 5

① Chen hyperboreus? 3277, 1 coracoid

3316-3321 ⑥ Larus sp. 1 carpometacarpus - 1 ulna, 1 tibiotarsi, - 1 tarsometatarsus -
 1 Femur

① Mergus sp. 3291 - 1 coracoid

⑤ Colymbus nigricollis 3265-3269 2 femora, 2 humeri, 1 carpometacarpus

② Mareca americana? 3285 - 1 coracoid, 1 humerus

① Limnodromus griseus? 1 ulna - 3314

② { Dafila acuta? 1 coracoid

Dafila or Mareca - 1 carpometacarpus 3287

② Larus philadelphia 3322-3323, 2 carpometacarpi

① Haliaeetus leucocephalus 3324, 1 phalanx of hallux

① Spatula clypeata? 1 coracoid 3288

✓ Case 30 Drawer H

Loc. ¹¹⁰ San Pedro Valley Arizona, Bowie - S (Drawer labelled Pliocene)

Swan? & proximal femur.

10 other fragments from San Pedro Valley, but without locality numbers.

✓ Case 30, drawer m Bird - Tarsometatarsus, (Grebe)

Loc. Shoo-fly Creek, Brunnew Idaho (34083 number on bone)

Gift of U.C. Berkley, in box of fish remains.

Drawer contains C.I.T. material lots 120 & 121 from Currier Butte, Brunnew, Idaho

✓ Case 29 drawer A - distal tibiotarsus (passerine?)

Loc. 589 Pleistocene terrace, Deposits San Andreas rift near Palm Dale.

Case 29 Drawer H

Bird prox. Femur -

maunal dist. femur

Loc. 208 Riverside Co - Pinto Basin

✓ Case 29 Drawer O - A3401

Bird bone Misc. Species - Sept 1933

Loc. Holland Land Co. Mound, Kitchen Middens, Sacramento Calif.

Bird - geese from same locality. Sept. 1933

✓ Case 29 Drawer P - Many bird bones, unpetrified, some identified
Sacramento Co.

✓ Case 29 Drawer A - 2 humeri, Late Pleistocene (may be pigeon)

Loc. 1184 / Adelndale Marl Quarry, San Bernadino Co. Calif.

2/8/57

Case #1 drawer 5 left. La. Co. Museum Cases (see also p. 2)

Distal Femur - Pleistocene - 1297 Vallecito Creek.

Carpometacarpus - Pleistocene - 1250-3 Vallecito, 3349. (passerine)
San Diego Co.

Bird ulna - prox portion - Vallecito Creek TD 78, 1433

✓ Case 26 Drawer F

1 complete ulna maybe modern chicken, 2 humeri 1 ~~to~~ proximal
ulna. Late Pleistocene (Probably Recent)

Loc. San Diego (Marine) 1080, 107

✓ Case 24 Drawer H

~~1 coracoid~~, 1 coracoid & 1 Tarsometatarsus

probably recent. (mixed with Pleistocene & S.D.)

San Diego (Marine) #21 - 5/24/47

✓ Case 24 Drawer L

1 tarsometatarsus, 1 tibiotarsus ^{Scapula} ~~1 humerus~~, 1 coracoid

Plio - Pleistocene.

Snake River Idaho 118

✓ Case 24 Drawer L

3 boxes

Grns americana - 1 tibiotarsus distal ¹¹⁸ ₃₂₃₁

unidentified Sacral & limb frag. 118

Stork - 2 coracoids & other frag. ~~118~~ 122 (118 - 1 distal humerus & 1 proximal ulna)

Loc. Snake River Idaho, 118, 122

Swan sternum, & dist. humerus ^{1 dist} _{by L. Miller}

✓ Case 25 Drawer Q -

1 humerus - large and other unidentified bones
from Wikieup Ariz. (Blanca) 460

✓ Case 24 Drawer ^G - 1 distal humerus, 1 coracoid proximal & distal,
1 tarsometatarsus proximal portion

(agg) - up. Hemphillian

Loc. 63 - Thousand Creek Nevada

✓ Case 24. Drawer ^G Los. Thousand Creek Cont. 63/495

Fulica sp. 1 distal humerus, unident. distal humerus
and 1 coracoid.

✓ Case 22 Drawer J - Dry Creek Oregon - 62

Owneye Pliocene. also Rome Oregon -

62 - Pelican? exped^{tion} ~~1928~~ 1928, 62, 3 portions of femur, 2 distal & 1 proximal

62/3242 Phalacrocorax auritus, Pliocene, 62, - 1 proximal humerus, Dry Creek

62/3241 - Forallon - Coracoid proximal portion, Dry Creek

62 - 1 box assorted; Rome Oregon Pliocene

61, 62 ^(32?) - 1 box ^{including} ~~assorted~~, 1 vertebra, 1 sacral portion, 1 ^{proximal} ~~distal~~ carpometacarpus,

62 - 1 distal ~~tarsometatarsus~~ fibiotarsus - Dry Creek Ore.

62/17 - 1 unident. distal humerus

62 - 1 coracoid distal portion, 1 distal tarsometatarsus Dry Creek.

62 ^(many are catelanus) - 9 bones ident. as Brauta dickayi by L. Miller

62 2 scapula " " swan " "

62 5 bones " " "goose smaller than B. dickayi" by L. Miller

✓ Case 20 Drawer L Fish Lake Valley T.D. 325 V2804 (10.12.53)

1 small distal fibiotarsus

✓ Case 11 Drawer G

1 Carpometacarpus Quail or passerine recent?

~~Quail~~ Quatal Canyon

✓ Case 11 Drawer H

Shark tooth hill -

Sulidae 2 proximal tarsometatarsi - 5 other unidentifiable fragments

✓ Case 2 drawer C -

Eze?

Tapo Ranch (Uintan) - 180

Scapula? unident.

✓ Case I drawer C

230 - Cody Wyoming -

1 distal tibiotarsus - Eocene

~~Drawer 7-A - San Diego To be sorted~~

La Brea Basement

* Case 24, Drawer - middle tier 3rd from bottom.

1 ulna - Recent?

Palos Verdes.

* Case 23 - 1st tier to aisle, 6 from bottom

1 distal ^{tibiotarsus} ~~femur~~ of Turkey - 1295/3457 -

1 Small box ^{of} fragments 1295 -

Loc. 1295 Harbor Freeway

X Case 23 - 2nd tier from aisle - 1st drawer from bottom
- many bird bones from tar seepage at Maricopa
Probably recent

X Case 23, tier, 4th from aisle, 11th from bottom
Santa Rosa Is. kitchen middens - Bird bones; 1 box and 1 envelope

X Santa Rosa Is. Case 23 tier 3 from aisle, drawer 8 from bottom C.I. Loc. 106
1 tray - identified bird bones -

X Removed 2 - 2 trays & 1 vial. unidentified bird bones
3rd floor "Misc. unrecorded" tray

Case 23, tier 3 from aisle, drawer 4 from bottom

X Santa Rosa Is. L.A. Museum Channel Islands Exped. Nov. 1941

Removed to 3rd floor "Misc. unrecorded" tray
1 ~~lat~~ tarsometatarsus 2 pieces; Caracara
1 distal end tibiotarsus - Caracara

X Case 23 - tier 4 from aisle - 8, 9, 10 drawers from bottom
contain bird - San Nicholas Is. Kitchen Middens

X Case 23 - tier 5 Several drawers of San Clemente Is.
Kitchen middens - Probably some bird. also Point Magu

X Case 22, tier 4 from aisle, 7 from bottom -
Misc. case and other presumably recent material
a few bird bones

Case 22 Tier 4 from aisle & from bottom - Stone Man Cave.

2 very small ulnae

2 frag. humeri - Grouse

1 humerus, 1 ulna - Pidgeon

fragments of wing bones - Condor

Case 22 - Tier 2 from aisle drawer 12 from bottom Baker Creek Cave 252

1 coracoid, 1 tibiotarsus, 1 humerus - Preservation suggests recent.

Case 22 Tier I drawer 5 from bottom; identified bird bones by H. Howard Smith ~~Smith~~ Creek Cave, Baker Nevada.

Case 22 Tier I, drawer 1 from bottom Smith Creek Cave Loc 251

1 box bones - 1 distal carpometacarpus, ~~distal humerus~~ 1 distal humerus

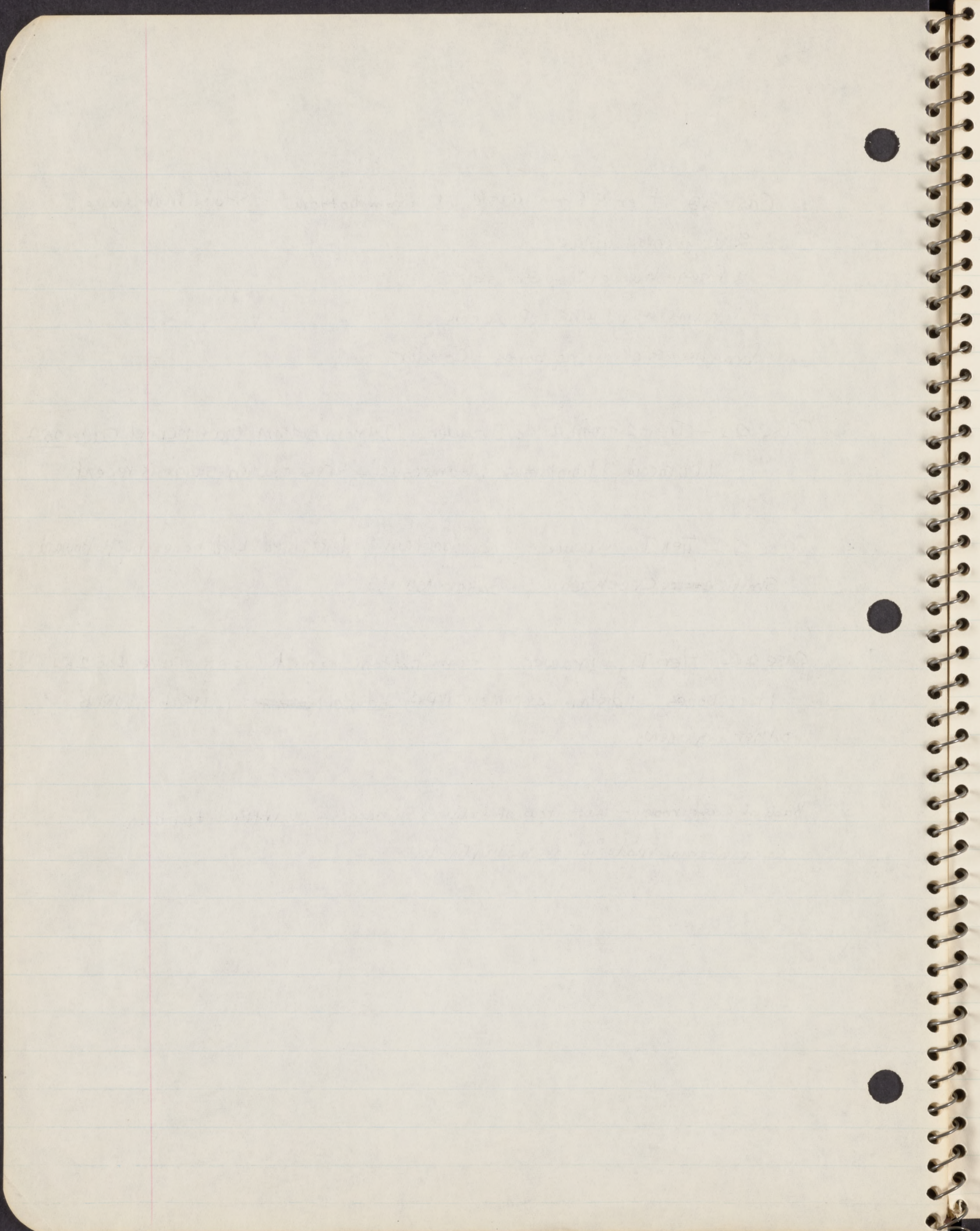
other fragments

Back of Cast room - Last row of drawers in back - Farthest tier back.

Carpenteria material including Birds.

Back of cast room - Nearest tier to entrance & top 1/2 of next tier

San Jacinto - largely identified by Hoye Miller, some unidentified



Smith Creek Cave - 1138

Eupetta delicata - proximal humerus

Small Creek Camp - 1902
Eugene H. Shultz - 1902

Basement cont'd

✓ Conkling Cavern 5th tier from aisle
7th drawer from bottom -
1 bird humerus? Removed to 3rd floor

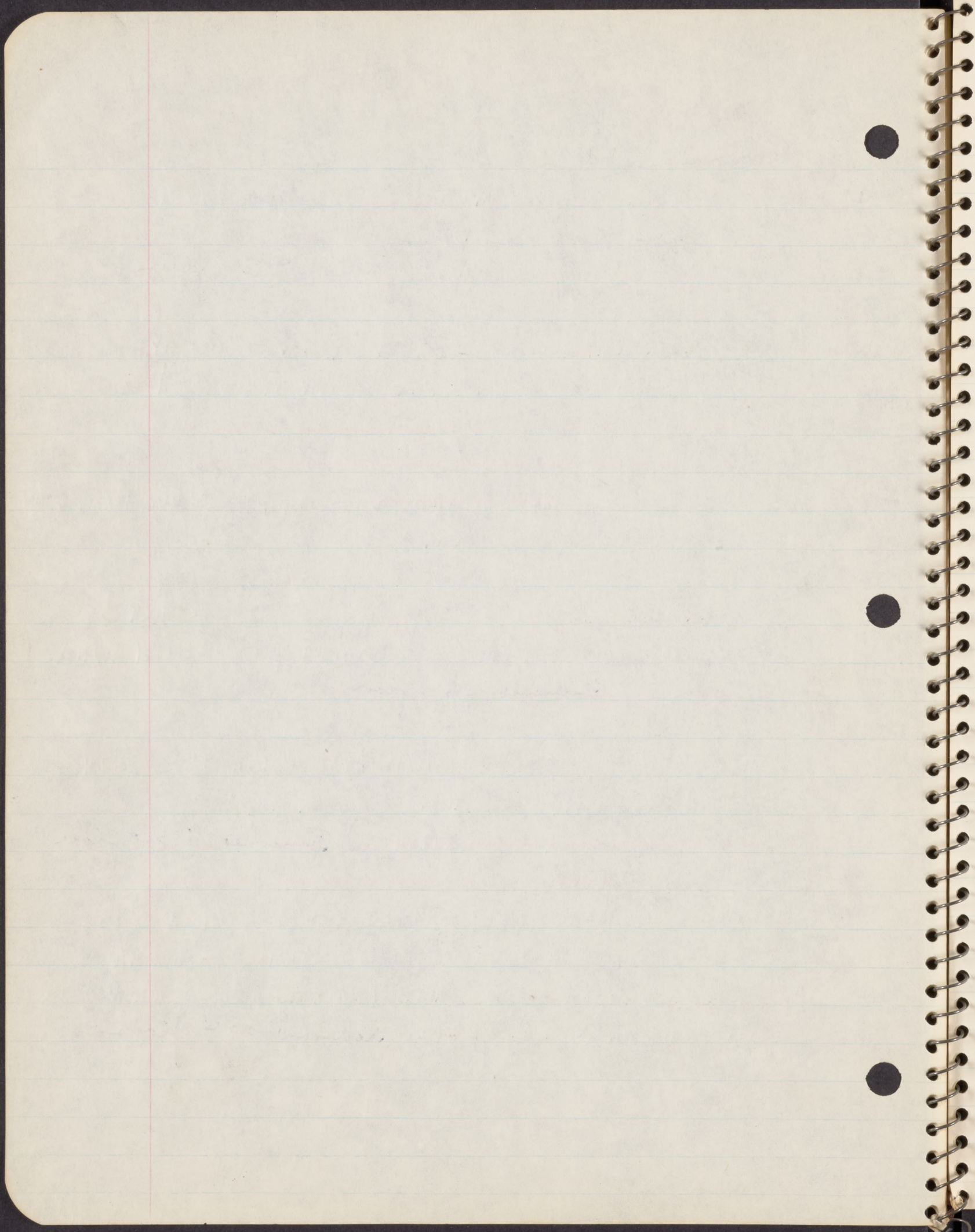
✗ * 3rd tier from aisle - Top drawer Conkling Cavern
14 bird bones - Large with inscribed
data

✓ Fosberg Cavern New Mexico. Loc 1154 3rd tier, drawer 6 from
bottom; 1 distal tibiotarsus -

Shelter cave - Loc - 278? - 2nd tier
from aisle - drawer - 5 from top - 1 bird ulna
recent? Removed to 3rd floor

Shelter cave - Loc - ? with data - 1010 - 5-2-14
tier 2nd from aisle - drawer 6 from top -
1 bird femur & coracoid. Removed to 3rd floor

Shelter Cave New Mexico - 1010 5-11-13, 1010 N-2-15,
1 humerus & 1 tarsometatarsus tier 2 from aisle
drawer 5 from bottom also 1 distal femur 1010 N-2-12
1 distal tibiotarsus, 1010 - N-2-13 Removed to 3rd floor



① Smith Creek Cave.

additional avian fauna Aug 1, 1962 Bill Arvey
collected by the Co. Museum in 1935 - 133 bones + frags.

Falcon

- 9 Falco mexicanus? 2 complete right coracoids
1 fragment left coracoid.
1 distal portion, left humerus
1 distal portion, right humerus
1 distal portion, right ulna
1 fragment, left carpometacarpus
1 distal portion, right carpometacarpus
~~Falco sparverius~~ 1 distal portion, left tibiotarsus

- 3 Falco sparverius? 1 distal portion, right tibiotarsus
1 distal portion left tibiotarsus
1 distal portion left tarsometatarsus

- 1 Small Falcon; sp? 1 distal portion, left humerus.

- 8 Ducks; sp? 4 right proximal portions humerus
1 proximal portion, left humerus
2 distal portions, left humerus
1 distal portion, right humerus

over

- ② 29 Ducks continues:
- 2 distal portions, left ~~humerus~~ ulna
 - 1 proximal portion, right ulna
 - 3 proximal portions, right carpometacarpus
 - 2 proximal portions, right coracoid
 - 3 distal portion, right tibiotarsus
 - 5 distal portions, left tibiotarsus
 - 2 distal portions, right tarsometatarsus
 - 5 distal portions, left tarsometatarsus
 - 1 proximal portion, left femur
 - 1 proximal portion, right femur
 - 1 distal portion, left femur
 - 1 distal portion, right femur
 - 1 proximal portion, left scapula
 - 1 proximal portion, left coracoid.

(including next page)
 ↓
 18

Grouse

- 2 distal portions, right ulna
- 2 distal portions, left ulna
- 1 incomplete right carpometacarpus
- 1 incomplete left carpometacarpus
- 2 proximal portions, right coracoid.
- 1 proximal portion, left tibiotarsus
- 1 distal portion, right tibiotarsus
- 1 distal portion, left tibiotarsus
- 1 distal portion, left humerus
- 1 proximal portion, left tarsometatarsus
- 2 incomplete right tarsometatarsi

③ Grouse cont'd 8 incomplete, left tarsometatarsi

50 Passerines

numeri - complete - 6

fragments - 6

ulnae - complete - 6

fragments - 6

fibiotarsi - fragments - 3

carpometacarpus - complete - 6

fragments - 6

tarsometatarsi - complete 1

fragments - 4

femora - complete - 0

fragments 3

coracoids - complete - 0

fragments 3

2 Condor, sp? - 1 proximal portion, left femur.

1 proximal portion, left scapula

5 owl, sp?

2 right coracoids (1 is tiny)

1 distal portion, right humerus

1 distal portion left humerus

1 distal portion left tarsometatarsus

including next page
3

Fulica americana

1 proximal portion, right humerus

1 distal portion right carpometacarpus

④ Julien corda 1 distal portion right tibiotarsus

1 Ballus sp? 1 proximal portion, right humerus

1 Caprimulgiformes - aeronautes? 1 right ulna

1 accipiter velox? 1 distal portion, right ulna

2 Himantopus mexicanus 1 left coracoid

1 proximal portion, left humerus

including many miscellaneous unidentified vertebrae
and limb fragments and parts of sacrum.

High birds from San Josecito Cavern recorded by L. Miller -

raicon
raicon

Symbols * - extinct † peculiar to San Jos.

Common with Ranch La B. X - nesting in region

1 *Nycticorax nycticorax*

Duck - near *Histrionicus*

1 - *Symnogyphus californicus*

X * 0 *Coragyps occidentalis*

1 * *Teratornis merriami*

1 *Clarus leucurus*

Parabuteo unicinctus

1 *Aquila chrysaetos*

1 * *Spizaetus grinnelli*

1 * *Wetmoregyps saggetti*

1 * *Neogyps errans*

1 * *Neophantops americanus*

1 *Circus hudsonius*

caracara

X * + *Polyborus prelorus grinnelli*

X 1 *Falco mexicanus*

1 *Falco sparverius*

X *Cyrtonyx montezumae*

Dendrotyx (?) sp.

X * + *Meleagris gallopavo*

1 *Fulica americana*

* + *Epipallus natator*

* + *Palumenus victima*

Indeterminate wader

Columba fasciata

1 *Zenaidura macroura*

Rhynchopsitta pachyrhyncha

Indeterminate parrot

* *Geococcyx conkingi*

X 1 *Tyto alba*

1 *Otus asio*

Otus flammeus

Otus trichopsis

X 1 *Bubo virginianus*

* *Bubo* sp.

1 *Glaucidium gnoma*?

X *Strix occidentalis*

1 *Cryptoglaux acadia*

1 *Asio wilsonianus*

X *Citrala virgata*

Phalaenoptilus nuttallii

Colaptes chrysoides

X 1 *Corvus corax*

Small passerines several

[Faint, illegible handwriting throughout the page, likely bleed-through from the reverse side.]

Additional list of Birds Found in San Josecito Cave
Chih. Mexico - Bill ARvey Aug 1962. * = species unrecorded from cave.

* Polymbus podiceps - 1 coracoid

Duck, sp. - 2 coracoids

4 ulnae

4 carpometacarpi - 2 complete, 2 incomplete

Coragyps occidentalis

2 humeri

1 femur

6 coracoids, 5 complete, 1 distal end

2 synsacral fragments

2 scapulae, proximal ends

1 ulna, proximal end

2 tarsometatarsi, 1 complete, 1 incomplete

2 carpometacarpi

Aquila chrysaëtos - 2 tarsometatarsi, 1 complete,
1 distal end

1 t. biotarsus

1 carpometacarpus, fragment with
distal end and shaft.

1 radius distal end

Circus hudsonius 1 femur

1 tarsometatarsus, distal end

Neogyps errans?
1 humerus, proximal & distal ends
1 radius, proximal end
1 femur, proximal end
1 synsacrum
6 phalanges

Neophrontops americana - 1 humerus
1 tarsometatarsus
3 ulnae - shorter than
Minimum La Brea Specimen.

Polyborus prelutosus grinnelli
1 humerus, nearly complete
1 tarsometatarsus

* Buteo, sp. 2 coracoids

* Accipiter s. velox - 1 ulna

Falco mexicanus 5 ulnae
2 coracoids

1 Femur

Falco sparverius 2 femora
1 humerus
2 carpometacarpi

★ Buteo n. mexicanus?

15 tarsometatarsi; 7 left, 8 right.

9 tibiotarsi; 5 left, 4 right

6 Femora

4 carpometacarpi

1 humerus

Hawk, sp. 8 ulnae

1 carpometacarpus

3 tarsometatarsi, all distal ends

1 humerus Fragment, distal

Quail, sp.

15 tarsometatarsi, 9 left, 6 right

7 Femora

7 humeri

4 tibiotarsi

2 coracoids

11 ulnae

1 carpometacarpus

Fulica americana

2 carpometacarpi

Fulica sp

1 tarsometatarsus - seems shorter, stouter than F. americana.

Indeterminate wader - 1 tarsometatarsus
1 Femur.

Columba faciata? - 1 carpometacarpus

Zenaidura macroura? - 1 humerus, right size but
different.

Rhynchopsitta pachyrhyncha 1 humerus
1 carpometacarpus

Indeterminate parrot - 2 ulnae.

Geococcyx conkingi - 1 Femur

* Geococcyx californicus? 1 ulna

Tyto alba 3 humeri, 1 complete, 2 broken distally
2 ulnae
3 Femora

Bubo virginianus 1 ulna

Asio wilsonianus ~~Asio~~ Asio 2 carpometacarpi

1 ulna

14 tarsometatarsi, 1 right, 1 left

Crypto glaux acadia? 2 t. biotarsi,

Otus asio - 1 carpometacarpus
3 tibiotalari

Otus trichopsis? - slightly longer and shallower
Shaft excavation than San Josecito Spec.

Cicaba virgata 3 tarsometatarsi
2 carpometacarpi
3 Femora

Owl, sp. 4 Tibiotarsi
7 Femora
4 tarsometatarsi
3 coracoids
1 humerus

Phalaenoptilus nuttallii 2 humeri, 1 complete, 1 distal end
1 coracoid.

may all
be same { Colaptes chrysoides? 2 humeri
* Colaptes cafer 2 tarsometatarsi
1 ulna

wood pecker sp. 1 femur

Corvus corax - many bones, most common
bird present.

Crow? or small raven

2 tarsometatarsi?

2 femora

other smaller passerines, includes many bones
as yet unidentified.



